PAPERS OF THE TWELFTH ALGONQUIAN CONFERENCE

Edited by

William Cowan

CARLETON UNIVERSITY
OTTAWA
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DEDICATION

We dedicate the papers of the Twelfth Algonquian Conference to the memory of our colleague and friend Philip L. Barbour, 1898-1980.

INTRODUCTION

The Twelfth Algonquian Conference was held at the University of Michigan, Ann Arbor, Michigan on October 17 and 18, 1980. The conference was organized by Richard Rhodes, of the Department of Linguistics of the University of Michigan. Linguistics was the most prominent theme at the Conference, with papers ranging from synchronic analyses of semantics and grammar to diachronic statements of phonological change. Of the 19 papers given at the Conference, 10 were submitted for publication here. Those not submitted are the following:

Richard J. Preston, McMaster University. Some notes on Eastern Cree relationships with beaver.

Peta Daniels, Royal Ontario Museum. Micmac ideograms.

Eric Hamp, University of Chicago. Persistant medial problems.

H. Christoph Wolfart, University of Manitoba. Howse on voice.

Lynn Drapeau, Université du Québec à Montréal. Les voyelles brèves *a et *i en position initiale de mot au montagnais: un rapport sur quelques changements à Betsiamites.

Vitaly Shevoroshkin, University of Michigan. Algonquian-Wiyot-Yurok and Salishan-Penutian-Hokan.

J. Peter Denny, University of Western Ontario. Algonquian word structure from the viewpoint of logical semantics.

David Pentland, University of Manitoba. The classification of Eastern Algonquian languages.

John Nichols, University of Western Ontario. Disentangling Ojibwa marginal verbs.

It is with sadness that we record the death of Philip Barbour, long a participant and contributor to the Algonquian Conference, longer a historian and documentor of the interaction between European and Algonquian cultures, longest yet a civilized, intelligent and warm human being. His papers, informally given and warmly received, were always illuminated by a wry, scholarly wit and replete with penetrating observations on the human condition. Although he had devoted much of his scholarly career to documentation of the English experience in Virginia at the beginning of the 17th century, his heart was with the Indians, and his final contribution to the Algonquian Conference was an analysis of Indian place-names in the works of Captain John Smith. We will miss him and his slow, careful vision of history.

William Cowan
Carleton University

The Wabanaki in Nineteenth-Century American Literature: Some Examples of How They Fared

Alvin H. Morrison
SUNY, Fredonia

ABSTRACT

Some of New England's most famous authors of the last century used the local Wabanaki Algonkians as subjects for prose or poetry. Their information sources often were colored by then-not-very-distant memories of deadly combat between Wabanaki natives and New England colonists. Frequently the resulting image was intentionally negative, yet that of the Noble Savage appeared occasionally also (for better or worse). This literature, too often accepted as factually true, has influenced the historical beliefs, and especially the attitudes toward Indians, of generations of schoolchildren and the reading public in general. Relevant works of three such authors are discussed: Henry Wadsworth Longfellow (1807-1882), John Greenleaf Whittier (1807-1892), and Nathaniel Hawthorne (1804-1864).

INTRODUCTION

This paper is a study of attitudes, but it is merely a personal commentary, and decidedly not a statistical analysis of a detailed survey. It is based upon that most biased of sample types: the couple of cases which first come to mind plus the few more cases that one adds upon later reflections and outside suggestions. It treats of nineteenth-century New England authors, but it was prompted by current New England negativism about the recent political settlement of the Maine Indian land-claims cases. It suggests that statistics really are not needed to demonstrate that many White New Englanders once had, and still have, black opinions of their Red neighbors.

In the unashamedly humanistic tradition of Robert Redfield's (1953:141) manifesto, in the final chapter of The Primitive World and its Transformations (entitled "The Transformation of Ethical Judgment"), the yardstick used in this paper is the relative proximity of being "squarely on the side of mankind." While absolute attainment of that goal may be humanly impossible, the goal itself is deemed inherently worthy of the striving.

As a former year-round resident and more recently as a regular visitor of the State of Maine, I certainly have not been unaware that some degree of White negativism toward Indians was endemic, and that any land-claims cases tended to be pooh-poohed. But suddenly in 1980, while Congress was considering federal payment of $81.5 million to Maine Indians, unsolicited anti-Indian tirades met my ear -- in New Hampshire as well ("We're probably next"). And in Maine, a formal movement petitioning to stop any Congressional settlement of the land claims won no small support, even if

not enough to have the legal effect of forcing the cases into the courts, where its leaders felt certain that the Indians would lose decisively. Clearly, any White liberal sentiments of the 1960s and '70s by now have been punctuated by conservative backlashes, and the financial awards that Maine Indians achieve through land-claims settlements will cause proportionate negativism in the attitudes of White Mainers towards them.

Overall economic factors, such as meteoric inflation and rampant tax increases, well may be the decisive last straw in the current White displeasure over the federal payments of Maine Indian land claims. Certainly they often are referred to by opponents. But also there is a strong distaste against "rewriting history." This idea is not mine -- it is a point that I have heard expressed more often than that about inflation and taxes. It usually is stated something like this: "The Indians lost over 200 years ago, so why are they entitled now to win? And if they now can rewrite the outcome of history, why can't everyone else? Where will it all end?" The picture-in-the-head "sense" of history that many New Englanders carry with them is violated by Indian land-claims cases. What Charles Hudson (1966) has termed "folk-history" (and distinguished from "ethnohistory") here is prejudiced strongle along lines both of might-makes-right/conquest-is-final and of all-sales-final/seller beware.

It is this militant folk-history theme, much more strongly expressed then than today, that pervades much of nineteenth-century New England literature. Jingoism is inevitable in the attitudes of a new nation born of victory over foreign domination. But the Redcoats who had enforced British colonial tyranny were not the only target of this attitude in the first century of the U.S.A. Colonial French politics and religion, the autochthonous Indians, even the very wilderness itself, all were perceived as hostile adversaries that the new nation had been forced to conquer in order to be free. The fact that all of these "enemies" had not yielded easily gave the struggle the semblance of one long continuous holy war for independence -- from felling the first tree to shooting the last Redcoat. In New England, this belief became an obsession. The very raison d'etre for New England's colonial start was its own peculiar brand of moral certitude, and ever since, New Englanders have never lacked in self-righteousness. Little wonder, then, that this ethnocentric subcultural sentiment permeated much of its literature.

When early and later works of some authors are compared, interesting attitudinal differences appear. Two noteworthy cases are those of Longfellow and Whittier, both born in 1807. Each of them wrote early-published poems about the Wabanaki Algonkians of northern New England, but later each prevented inclusion of these poems in his authorized complete-works volume. Later, too, each of them wrote famous poems about Indians that were included in his complete works. The difference between the early and later poems in each case is not merely one of artistry -- their Indians evolved from being enemy villians to become Noble Savages in

their own right, as the poets matured attitudinally and rose above the prevailing jingoist influences of their society. The Longfellow case will be considered first.

LONGFELLOW

Henry Wadsworth Longfellow (1807-1882) was born at Portland, Maine into a family that still included General Peleg Wadsworth (1748-1829). That old soldier had participated actively in various campaigns during the American Revolution, including the unsuccessful defense of eastern Maine from British invasion. Henry himself was seven years old when the British again penetrated eastern Maine during the War of 1812. It would be understandable if the boy tended to connect these two wars. He might well even have felt some continuity between the two very separate historic destructions of his home town: by the British in 1775, and by the French and Indians in 1690. Anyway, when Longfellow published his first poem at age thirteen, in 1820 (the year Maine became a state), he classed as "Patriots" who "fought for their country" the party of scalp-bounty-hunters under Captain John Lovewell who waged a no-winner battle with the Wabanaki in 1725 at Pequawket (Fryeburg, Maine). The poem appeared in a Portland newspaper and was entitled "The Battle of Lovell's Pond." The final line reads: "And their names are engraven on honor's bright crest." Longfellow's partisan attitude here expressed the prevailing spirit of that time, with all the fervor of a youth of age thirteen, but it is not difficult to see why the mature poet did not want this poem included in his complete works.

Five years later (1825, the year he graduated from Bowdoin College), Longfellow again addressed the very same subject when he published his "Ode Written for the Commemoration at Fryeburg, Maine, of Lovewell's Fight"/"Air -- 'Bruce's Address'" [also known as "Scots Wha' Ha'e"]. The overall tone is milder than that of his first poem, but the second stanza now seems just as blindly partisan:

> In those ancient woods so bright,
> That are full of life and light,
> Many a dark mysterious rite
> The stern warriors kept.
> But their altars are bereft,
> Fall'n to earth, and strewn and cleft,
> And a holier faith is left
> Where their fathers slept.

However, also in 1825, Longfellow published two other local-Indian poems. "Jeckoyva" depicts the tragedy of a Wabanaki hunter's accidental fatal fall from a mountain ledge, while alone, at night, "near the White Hills" of New Hampshire. "The Indian Hunter" tells of a Native American's suicide after contemplating from a hilltop, one autumn day, all that the Whites had done to change his people's lands in the surrounding countryside. Both are somewhat lugubrious themes, but they are at least more concerned with the Wabanaki as fellow human beings, even if heading in the direction of the romantic extremism of the Noble Savage image. These are not only among his first

or "Juvenile Poems,"[1] but apparently are Longfellow's last considerations of the Wabanaki as well, for reasons unknown to me, if there were any reasons except his expanding interests elsewhere. His later poems dealt with Amerinds from other regions of North America.

The republished complete works of Longfellow contains poems with passing references to Indians -- e.g., "Evangeline" (1847) and "The Courtship of Miles Standish" (1858) -- but only three poems are directly concerned with them: "Burial of the Minnisink" (1825),[2] "To the Driving Cloud" (1845), and of course the epic poem "The Song of Hiawatha" (1855). Despite his Iroquoian name, "Hiawatha's" setting is among the Chippewa, owing to a confusion largely the responsibility of Henry Rowe Schoolcraft (1793-1864). While consideration of "Hiawatha" is outside the geographical scope of this paper, it should be noted that this probably is Longfellow's most famous poem. And it is the epitome of the romantic Noble Savage image. Longfellow indeed had come far, from Lovewell's Pond to "the shores of Gitche Gumee."

WHITTIER

John Greenleaf Whittier (1807-1892) was a Quaker farm-boy from northeasternmost Massachusetts -- the southern corner of Wabanakia. His formal education was scanty but he read widely and became enamored with New England history. The final twenty-odd miles of New Hampshire's fertile Merrimack River valley had been usurped by Massachusetts in colonial times, and this estuary which had once teemed with bands and villages of the Pennacook Confederacy was a most meaningful part of Whittier's Essex County, and the locale of some of his poems. While the topics, meters, and approaches of some Whittier poems are less sophisticated and more down-to-earth than most of Longfellow's, there are also similarities between these coeval poets, both in their earlier works and in their mature ones.

Whittier's first book, published in 1831 and entitled Legends of New England, contains 18 pieces of poetry and prose, half of which deal with largely negative-image Indian events from all over New England -- e.g., "The Midnight Attack" and "The Human Sacrifice."[3] These were deliberately sensational short items such as newspaper columns thrive on, but Whittier also hoped to prompt antiquarian enthusiasm both among readers and fellow authors. At the end of his prose piece entitled "The Mother's Revenge" (about Haverhill heroine Hannah Dustin's famous capture and escape in 1697) he wrote:

> And the time is coming, when all these traditions shall be treasured up as a sacred legacy - when the tale of Indian inroad and the perils of the hunter -- of the sublime courage and the dark superstitions of our ancestors, will be listened to with an interest unknown to the present generation.... [Whittier 1831:130]

But while the theme of "The Spectre Warriors" poem reappeared in the 1857 poem "The Garrison of Cape Ann," the

remainder of these 1831 Indian materials was abandoned. The editor of the 1965 facsimile reprint of the 1831 Legends states (in an "Introduction") that in later life Whittier refused to allow the book to be reprinted, and even bought a copy so as to burn it. His dislike of it must have been based solely upon artistry considerations, because some later poems are just as gory as these early ones. Indeed, Whittier seems to have mingled a yellow-journalism approach with his Quaker pacifism and social-reform zeal. Many of his later poems are truly genteel, but occasionally he could be quite gross, perhaps only the better to elicit protest against the condition he was describing all too vividly.

Birthplace boosterism also may help to account for some of Whittier's lurid lines in his 1838 poem "Pentucket/1708" -- e.g., "Sank the red axe in woman's brain,/And childhood's cry arose in vain." Pentucket was the Wabanaki name for his native Haverhill on the lower Merrimack. The 1708 French and Indian attack thereon was the poem's topic, but it would have been hard to forget the 1697 attack's reverse aftermath: Hannah Dustin triumphantly returned there with the axe and scalping-knife (still on display) that she herself had applied to ten Indians in revenge for capturing her and bashing-in the head of her newborn baby. Strong stuff, but true enough.

In his 1834 epic poem "Mogg Megone," Whittier takes great liberties with historical facts, apparently only to make the point more obvious that wars lead to inhuman excesses on all sides. Historically, sagamore Mogg Hegon was killed in combat with English settlers in his attack on Scarborough (Maine) in May 1677 -- not by the daughter of an English outlaw who had promised Mogg her hand in payment for a tract of land. Nonetheless, Whittier's version does allow him to chide the religiously-motivated excesses, not only of the French and Indians throughout the colonial wars, but that of the New England rangers as well, in their desecration of Jesuit Father Rasles and his Norridgewock Mission in 1724. Whatever his shortcomings in historiography, Whittier still deserves credit for writing a more nearly impartial denouncement of war than one is apt to find in New England in 1834. The poet himself later consigned "Mogg Megone" to the back of an "Appendix" in his Complete Works (1895: 495), with this comment: "Looking at it [the poem], at the present time [1888], it suggests the idea of a big Indian in his war-paint strutting about in Sir Walter Scott's plaid."

"Funeral Tree of the Sokokis/1756" tells of the burial of Chief Polin after he was killed in action against English settlers at Windham (Maine). However, there is no discussion of military enmity-in-life in this 1841 poem, only a consideration of human brotherhood-in-death. Whittier as philosopher made some mistakes here in Sebago Lake area geography, and (of course) he did not have the benefit of Gordon Day's (1965) corrective regarding the Saco River Indians not being the "Sokokis." The poem is very well-intended, nonetheless, and it shows polar-opposite attitudinal difference from his 1831 literary treatments of Indian enemies.

"The Bridal of Pennacook/1662" is the romantic story of the marriage and separation of Merrimack River paramount sagamore Passaconnaway's daughter Weetamoo (resident near Concord, New Hampshire) to Winnepurkit, the sagamore of Saugus (Massachusetts). Poetic license reigns supreme, and all characters are Noble Savages including the overly proud and seemingly non-caring bridegroom. This is an epic poem written by Whittier in 1844; it belongs in the same genre as Longfellow's "Hiawatha" (1855).

The 1856 poem "Mary Garvin" tells a strange, undated, captivity tale. Mary was captured as a girl in a Wabanaki raid on Scarborough, Maine. Taken to Canada, she converted to Catholicism, married, bore a daughter Mary, and died there. Honoring her mother's last request, Mary Junior journeyed to live with her grandparents in Scarborough. Whittier cleverly describes the difficulties that Protestant kith and kin had in adjusting to her presence among them. The poem ends: "Thought the elders, grave and doubting, 'She is Papist born and bred;'/Thought the young men, 'Tis an angel in Mary Garvin's stead!'"

Multiple themes are present in the 1860 poem "The Truce of Piscataqua/1676," namely: of English captives happy enough to stay voluntarily among the Wabanaki; of English inhumanity to a Wabanaki wife and child; and of Wabanaki grief over the death of that child killed by the English. These issues are enough for any one poem to handle, and to show the immense changes in Whittier's attitudes between 1831 and 1860. However, the title implies content not forthcoming here, or even elsewhere. Whittier unexplainably ignored the most famous aspect of that Truce of Piscataqua in 1676, and thereby lost the chance to chastise a manifold scoundrel.

The story he does not tell is that in 1676, on the Piscataqua River (between Maine and New Hampshire, on the seacoast), the Cocheco (Dover, New Hampshire) Treaty of 3 July brought hope of peace, but on 6 September Major Richard Waldron's "Trick" marked him as a villain extraordinaire. Taking advantage of the coincidental presence of immense numbers of both colonial troops and visiting Indians, Waldron organized a military "game," in which ca. 200 "suspected" Indians were captured for later execution or enslavement in foreign parts. Surely Major Waldron's perfidy during the truce at Piscataqua in 1676 is noteworthy indeed, yet Whittier avoided the issue, even though he despised Waldron for the persecution of Quaker women (described in his 1883 poem "How The Women Went From Dover:), and even though the Wabanaki eventually (1689) punished Waldron for his many misdeeds to them -- a tale worth telling in itself.

An even stranger omission by Whittier has come to my attention serendipitously. While turning the pages of an ("irrelevant") article on Morrill family genealogy in Sprague's Journal of Maine History, enroute to a paper on another ("important") subject, my eye chanced upon the following:

> Peter (3) had a daughter killed and scalped by the Indians. As the story is told, she and an older brother had been sent into the forest to get a hemlock broom. She happened upon some lurking savages, who were waiting for darkness to attack the settlement. She screamed and the savages caught and scalped her to prevent the spread of the alarm. She expired on her father's doorstep.
>
> When the Indians learned that they had killed a Quaker maiden they were filled with regret; on their return march north they stopped at a small lake, some three miles away and carved her picture on a great tree.
>
> This lake was then named "Picture Lake" and is still so called. The tree was often visited and the story is still told beneath its boughs by the old inhabitants to the children of today "in her memory." [McCollister 1921:190]

The Peter (3) Morrill family lived in North Berwick, Maine, and the "Berwick Quandrangle" 15-minute topographical map indeed shows a "Picture Pond" in the abutting town, Sanford, on a potential water route northward. Perusal of Morrill family genealogical documents at Maine Historical Society turns up only repetitions of this tradition with no further details. I assume that the victim was either Sarah (b.1736) or Ruth (b.1744), but nothing is stated regarding the death (or death date) of either daughter.

How did Whittier, the Quaker voice of New England's history, happen to miss this fascinating scenario? Even when I looked further, I found no answer -- only an even more baffling non sequitur. In a typescript notebook at the Maine Historical Society, a member of the Morrill clan "name-dropped" that the poet Whittier was a family friend, quoting an uncited line of his ("The friendly doors of distant Berwick Town") as evidence, and suggesting that his 1873 poem "The Friend's Burial" was a tribute to a contemporary Morrill (although its locale seems to be Seabrook, New Hampshire). Undoubtedly each of us has similar unfinished business, for no really good reason but inertia, yet it is frustrating indeed not to know why Whittier passed up these two made-to-order opportunities -- on the one hand, Waldron's persecutions, perfidy, and eventual punishment by the Wabanaki, and on the other hand the true pathos of the Morrill scalping and sculpture.

Perhaps some "mental archeologist" someday can answer either or both of these questions which I now cannot. Certainly the answer does not seem to lie in any manifest attitudinal unwillingness of Whittier to credit the Wabanaki with sensitivity. He clearly evidences later having outgrown his 1831 jingoistic attitudes of envisioning Indians as mere hostile fiends plaguing an innocent New England frontier.

HAWTHORNE

Nathaniel Hawthorne (1804-1864) was born at Salem (or Naumkeag, as it was called by the Pennacook Wabanaki), in the same Essex County of Massachusetts as Whittier. He too became enthralled with New England history and worked it into many of his literary creations. Although Hawthorne wrote no novels or short-stories about the Wabanaki or any other Indians per se, he is included here because of certain interesting perspectives he gives us on Indians and the New Englanders who fought them. Through consideration of Hawthorne, we can better understand the zeitgeist of the other two authors.

As a boy, Hawthorne visited lengthily at an uncle's house in Raymond, Maine, on Sebago Lake in what was then the wilderness. The forest and its former Native American occupants made a lasting impression upon him, as is evidenced in various of his literary works. Hawthorne used both forest and Indians to symbolize the antithesis of the many constraints upon which the White Man's civilized society is dependent for better or worse. This is the old European "wildman" symbol in New World garb. I am not sure that Hawthorne meant to denigrate Indians by this symbolic usage; he even seems to view Indians as less self-deluding than Christian Euro-Americans. Yet the Child of Nature image is as unrealistic as the image of the Noble Savage, and just as open to implying less capacity for culture than civilized peoples possess.

However, it is not always clear what Hawthorne believed about Indian potentialities and accomplishments. In his short-story "Young Goodman Brown" (1835), Hawthorne depicts Salem Village's Puritan minister and deacon as riding into the forest to meet with the Devil at a large unholy gathering. The deacon comments to the minister that they expect to meet there "several of the Indian powwows, who, after their fashion, know almost as much deviltry as the best of us [Puritans]." While this seems relatively complimentary to the Indians, it is followed soon afterward by a put-down: "Scattered also among their pale-faced enemies were the Indian priests, or powwows, who had often scared their native forest with more hideous incantations than any known to English witchcraft."

Hawthorne's own opinion appears even more ambiguous at times by his use of Puritan attitudes in relating his tale. His short-story "The Maypole of Merry Mount" (1836) tells of the raid by Massachusetts Puritan soldiers to destroy the non-Puritan English settlement of Mount Wollaston, called Merry Mount because of the continual festivities held there. "But a band of Puritans, who watched the scene, invisible themselves, compared the masques to those devils and ruined souls with whom their superstition peopled the black wilderness."

It is curious that Hawthorne passed up a Raymond (Maine) legend to use for a literary theme. Within four miles of his uncle's home in Raymond is Frye's Leap, a 70-foot

lakeside cliff named after one Captain Frye who, when pursued by hostile Wabanaki, supposedly leapt off it into either water and/or snow-covered ice below, then swam and/or ran the quarter-mile remaining to nearby Frye's Island -- the Indians permitting him to escape in tribute to his bravery. Surely there seem to be all of the literary requirements present here to formulate a fine escape story (even if the historical details are uncertain), yet Hawthorne ignored this unused theme in favor of a shopworn one.

About thirty miles west of Raymond, on the same road from Portland to the White Mountains of New Hampshire, is Fryeburg (or Pequawket/Pigwacket), on the bend of the Saco River. Here, in 1725, occurred "Lovewell's Fight" with the Indians, made famous in regional ballads and the subject of two of Longfellow's "juvenile" poems. Hawthorne opted to rework this event as the basis of an indirect-escape story -- "Roger Malvin's Burial" (1832). He must have been prompted to do so by a number of factors.

First, Longfellow was a friend and Class-of-1825-mate of Hawthorne's, at Bowdoin College in Brunswick, Maine. Hawthorne must have been acquainted with Longfellow's 1820 "Battle" and 1825 "Ode" poems, as well as with the relevant ballads (both acknowledged and unacknowledged) of Bowdoin philosophy professor Thomas Cogswell Upham (1799-1872).

Second, the Pequawket battle centennial -- for which Longfellow composed his "Ode" -- took place in May 1825. Hawthorne must have been at least indirectly interested in this event which so obviously stimulated Longfellow and Upham.

Third, Maine became a state in 1820, and popularized propaganda commemorating its bloody colonial history still must have been very much in vogue during Hawthorne's Bowdoin years.

Fourth, the U.S.A. celebrated its first half-century anniversary in 1826, and there is reason to believe that Hawthorne became dissatisfied by some of the overblown and distorted folk-history that was published for and around that occasion. All four of these factors well may have intersected to make "Roger Malvin's Burial" (1832) Hawthorne's own subtle response to the overkill of biased stimuli.

For background, it will suffice to say that the Pequawket battle was one of a number of incidents in the Abenaki War of 1721-1726 -- a war with no European counterpart, in which New Englanders largely took the offensive to attack Wabanaki villages. Captain John Lovewell led an English party of scalp-bounty-hunters from Dunstable, Mass., first to Ossipee in New Hampshire, then to Pequawket in Maine where he and many of his men were killed by Wabanaki led by one Paugus (who may have been a Scaticook, visiting northern New England to try to even up a dispute with the English).[4] Because Paugus and many of the Wabanaki involved were killed, and others left the area, this no-winner battle was hailed as

a New England "victory" -- no matter how Pyrrhic. Immediately the press and populace waxed enthusiastic, and an 18-verse ballad account of the fight supposedly was composed at that time by a now-unknown author. Its opening stanza tells us:

> Of worthy Captain Lovewell I purpose now to sing,
> How valiantly he served his country and his king:
> He and his valiant soldiers did range the woods
> full wide,
> And hardships they endured to quell the Indians' pride.

However, it was the centennial observances of the Pequawket fight that indulged in the greatest excesses of palaver. The January 1824 North American Review stated "The story of Lovewell's Fight is one of the nursery tales of New Hampshire [why not Maine, too?]; there is hardly a person that lives in the eastern and northern part of the state but has heard incidents of that fearful encounter repeated from infancy."

Farmer and Moore's Collections, Volumes I, II, & III (1822, '23, 24) present various accounts of Lovewell's battle, including an anonymous 30-verse ballad later attributed to Bowdoin professor Upham, one stanza of which is:

> Twas Paugus let the Pequawket tribe --
> As runs the fox would Paugus run;
> As howls the wild wolf, would he howl,
> A large bearskin had Paugus on.

At some point, Upham visited the Fryeburg battle site and was inspired to write a seven-verse poem which he acknowledged as his own. It includes these separate lines of overblow:

> For the names of the fallen are graved in our hearts....
> The bosoms that once for their country beat high....
> Sleep, soldiers of merit! sleep gallant of yore!...
> The tear drop shall brighten the turf of the brave.[5]

The 25 May 1825 issue of The Columbian Centinel pontificated that "Lovell's Fight and incidents relating to many of those who marched with him, leave nothing for the embellishments of romance." And the story of the battle therein presented purported to be the "mirror of true history," emphasizing Lovewell's "chivalrous devotedness, hardihood, and contempt of danger unknown in modern times."

In a 1964 paper entitled "History and the Bible in Hawthorne's 'Roger Malvin's Burial,'" Ely Stock puts this jingoistic journalism in proper perspective.

> The treatments of Lovell's Fight current in...
> [Hawthorne's] day were perfect instances of
> the transformation of what had formerly been
> religious feelings into secular myth.
> [Stock 1964:285]

> [New England clergymen] ... were able to
> transform a band of fortune hunters into embodi-
> ments of the ideals of progress and perfectability.
> [Stock 1964:284]

> It is hardly surprising that Hawthorne, keenly interested as he was in the moral consequences of human action in colonial times, directly contradicted this popular and typical treatment of the historical incident. For the newspaper report... [assumed] that since the results of Lovell's Fight were favorable in national terms, the event could be treated apart from consideration of the consequences of the action on the individuals involved. By ignoring the moral implications of the action of Lovell and his band the frontiersmen were transformed in an indiscriminate way into folk heroes. [The] ... popular treatments of Lovell's Fight...overlooked certain embarrassing features of the incident which were known in Hawthorne's time... [such as] the offer of one hundred pounds from the Massachusetts General Court for every Indian scalp [brought in] .... [Stock 1964:283]

Hawthorne opens his 1832 short-story "Roger Malvin's Burial" with a strong ironical commentary on these contemporary views of history. The story itself tells of events well after the battle. Except for the statements that the Indians' "war was with the dead as well as the living," and that "the savage enemy" regularly destroyed farmers' crops, and that "savage beasts and savage men were as yet the sole possessors" of the wilderness to the north, there is nothing else relevant for our consideration here. This story is a true put-down by Hawthorne of the jingoistic literature and journalism of his day. His concern is with the moral interaction of two Whitemen after the battle of Pequawket, and only the opening paragraph speaks of the event from which they are returning, wounded.

Although Hawthorne is sometimes thought of as being pro-Puritan (and, ergo, anti-Indian), such a simplistic belief is inadequate in the light of the following quotations from others of his short-stories.

In "The Gray Champion" (1835), Hawthorne refers to "the veterans of King Philip's war, who had burned [Indian] villages and slaughtered young and old, with pious fierceness, while the godly souls throughout the land were helping them with prayer."

"The Maypole of Merry Mount" (1836) contains the following description:

> Unfortunately, there were men in the new world of a sterner faith than those Maypole worshippers. Not far from Merry Mount was a settlement of Puritans, most dismal wretches, who said their prayers before daylight, and then wrought in the forest or the cornfield till evening made it prayer time again. Their weapons were always at hand to shoot down the straggling savage. When they met in conclave, it was never to keep up the old English mirth,

> but to hear sermons three hours long, or to proclaim bounties on the heads of wolves and the scalps of Indians. Their festivals were fast days, and their chief pastime the singing of psalms. Woe to the youth or maiden who did but dream of a dance! The selectman nodded to the constable; and there sat the light-heeled reprobate in the stocks; or if he danced, it was round the whipping-post, which might be termed the Puritan Maypole.

In "Endicott and the Red Cross" (1838), amongst various ironic perspectives on the Puritans, the military might of their militia is compared with that of the Indians:

> Except the malefactors..., and the diseased or infirm persons, the whole male population of the town, between sixteen years and sixty, were seen in the ranks of the trainband. A few stately savages, in all the pomp and dignity of the primeval Indian, stood gazing at the spectacle. Their flint-headed arrows were but childish weapons compared with the matchlocks of the Puritans, and would have rattled harmlessly against the steel caps and hammered iron breastplates which inclosed each soldier in an individual fortress. The valiant John Endicott glanced with an eye of pride at his sturdy followers, and prepared to renew the martial toils of the day.
>
> "Come, my stout hearts!" quoth he, drawing his sword. "Let us show these poor heathen that we can handle our weapons like men of might. Well for them, if they put us not to prove it in earnest!"

The Devil himself, in the forest, tells "Young Goodman Brown" (1835) that

> I helped your grandfather, the constable, when he lashed the Quaker woman so smartly through the streets of Salem; and it was I that brought your father a pitch-pine knot, kindled at my own hearth, to set fire to an Indian village, in King Philip's War. They were my good friends, both....

Truly the deepest of the authors considered in this paper, Hawthorne keeps us guessing about his attitudes toward Indians. It might well be said that he seems to damn Indians with faint praise. But at least he placed no Indian-fighters on pedestals, and obviously thought the less of those who did. In that respect, Hawthorne's treatment of the subject is more even-handed than that of Longfellow or Whittier, and, unlike them, Hawthorne is more consistent over time.

CONCLUSION

The literary evidence shows that both Longfellow and Whittier each evolved a more humane image of Native Americans after each had risen above the blinding cloud of jingoistic folk-history in which they were brought up. However we may feel today about the Noble Savage stereotype, it was a positive improvement over that of the Blood-Thirsty Savage, at least. Hawthorne can be seen not only to have surfeited on the prevailing form of chauvinism, but also to have worked against it consistently in his own subtle way. While he still may be labelled as a chauvinistic writer himself, he was not jingoistic -- i.e., while strongly patriotic, Hawthorne was not inclined toward a military-might-makes-right type of patriotic fervor. He clearly demonstrates considerable objectivity in his writings, if only of the "A plague o' both your houses!" sort. Hawthorne was ahead of his time and colleagues, attitudinally.

The indoctrination effect of nineteenth-century literary jingoism lasted until ca. 1950, as I personally can testify. As a child, in Portland Maine, I had live-in grandparents who were born ca. 1865. New England folk-history and literature were one of their favorite pastimes. Nor were they unique, because several of my early-grade-school teachers shared these interests thoroughly. Although younger than my grandparents, these teachers had had my parents as grade school students. Poetry learning-and-recital were still routine; Longfellow was the hometown hero, and we celebrated his birthday regularly in school. Accepted at face value, poetic history was standard fare, especially during World War II, when our daily rites of intensification included heroes of past wars enshrined in song and story.

By 1950 all of these older teachers had retired, and new curricula allowed less time for poetry. However, in 1950 a more prosaic style of jingoism began, in the form of Senator Joseph McCarthy's anti-Communist witch-hunting. Perhaps it was this American tragedy which most clearly opened my eyes to what jingoism is. Earlier I had learned that "poetic license" allows authors to bend historic data to fit their rhymes and plots. It takes no quantum leap to conclude that "poetic license" plus jingoism equals a very distorted folk-history -- however politically useful it may be. Apparently a great many of our fellow citizens today are either unable or unwilling to make such a conclusion, however. So, the echoes of early-nineteenth-century ethnocentrisms are with us still, perhaps most noticeably in the attitudes of Whites toward Indians.[6]

NOTES

[1] Longfellow's "Juvenile Poems" constitute the first section of the Appendix of Volume 1 of the fourteen-volume Longfellow's Works (1966:1:289ff).

[2] That makes a total of three poems about dead Indians published by Longfellow in the single year 1825. The psychological reasons for this, if known, probably would be both interesting and relevant to the present paper's concerns.

[3] "The Human Sacrifice" is a title that Whittier uses twice in different contexts. I refer herein to his 1831 prose account of purported Indian activities in Moodus, Connecticut, and not to his 1843 poem opposing capital punishment.

[4] Maine ethnohistorian Fannie Hardy Eckstorm (1939) has presented a rather convincing case that Paugus was a visiting Scaticook. He seems not to have been a long-term local sagamore of Pequawket.

[5] These several ballads appear in descriptive contexts in Farmer and Moore (1822:25-36) and (1824:64-66; 94-97), in Drake (1851:312-317), and in Kidder (1865/1909:94-102).

[6] Thanks are due to several persons who helped me in the development of this paper, which was conceived years ago, after I first saw reference made to Longfellow's first poem. It was prenatally nourished by my encounter with two papers about Henry David Thoreau's (1817-1862) Penobscot Indian guides, whom Thoreau himself described in The Maine Woods (1864) and elsewhere (see Snow 1970 and Smith 1971).

Fredonia English professors Douglas Shepard and George Sebouhian assisted me in its birth. Dr. Shepard located Longfellow's first poem for me, and called two others of these "juvenile poems" to my attention in the process. Dr. Sebouhian suggested the inclusion of Hawthorne's works -- starting with "Roger Malvin's Burial" (for which story he loaned me a file of critiques).

At its christening, the paper elicited some audience responses which I have endeavored to heed in preparing it for graduation (i.e., publication). University of Michigan English professor Walter Clark commented that Hawthorne's use of Indians, as well as of the forest, is largely symbolic, representing the antithesis of all the constraints upon which Euro-American civilized society depends. Smithsonian linguist Ives Goddard and McMaster ethnologist Richard Preston both warned me not to be as ethnocentric as the nineteenth-century authors under discussion, in my assessments of that literature, and I now have tried at least to explain (if not excuse) my biases herein, a la Robert Redfield (1953:141). Finally, Mrs. Sarah Preston suggested that Whittier might have had personal Quaker reasons for not writing of the Morrill murder-scalping, namely that to do so might prove distressing to his friends (fellow Friends) the Morrills.

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On Considering the Feasibility of Establishing Key-spellings for Indian Place-Names in the Index to The Complete Works of Captain John Smith

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From the outset, I should like to stress the tentative character of what I am about to put before you. I will welcome any comments you may have, and suggest that you make them privately unless you feel that they are of general interest. And I will lead off with a comment of my own. The assiduous Frederick Webb Hodge made a stab at gathering varying spellings under one head in the so-called SYNONYMY section of his still valuable Handbook, which appeared on the market in the days when I got a medal for excellence in Latin--not Algonquian. Unfortunately, Hodge seems not to have known what a synonym was (and still is), and still more unfortunately the distinguished Smithsonian Institution did not trouble to find out, and consequently the Northeast volume (No. 15) of the new Handbook of North American Indians persists in this bit of silliness. (Robert Tindall's cartographic entry "Tapahanna" on the James was a sort of synonym for Smith's Quiyoughcohanock, which was the same place, but "Pasbyhayes" is no more a synonym for Paspahegh than "sumthin" is a synonym for something.) Why not call them "variant transcriptions (or spellings)"?

To get back to the subject. What has made the matter of key-spellings an immediate concern is the fact that the Institute of Early American History and Culture is at last faintly whispering that something may really be being done about the publication of my edition of Smith's Works, and has been in contact with Professor David B. Quinn's wife, Alison, regarding the Index. My late lamented assistant, Wolfgang Rennert, got as far with indexing as he could without any proofs to work from, but I regret to say that I no longer feel up to the thousands of entries to be checked and completed. I am delighted that Alison Quinn, a noted indexer, will trouble to help out, or better, take over. Nevertheless there are some spots where I fear I must run interference. While the place and personal names of continental Europe, Asia, and Africa will present no cause for concern--since the correct forms of all of these are available in the various national encyclopaedias and the London Times Atlas, there are a few minor details where I shall interpose my own system of transliteration (based on sound, not on spelling), as in Ra's at-Tīn, Libya, not Ras al-Tīn, and a major issue involving Indian words and names. On this point I have lamentably strong opinions.

To circumscribe the area involved, North American Indian personal and place names contained in Captain John Smith's works have no "correct" forms. A dozen or two of them have accepted spellings based on usage. For the rest, just take a look at Hodges' so-called SYNONYMY, or the pages (conveniently scattered) of so-called synonymies in the new Handbook! Anywhere from two or three to more than fifty

variant transcriptions, or spellings, have been recorded of more than 250 Virginia, Maryland, and New England place-names listed by Smith, without counting a fair number of identical place-names for widely dispersed villages or geographical features connected with differing tribes, and omitting a goodly number of personal names not recorded by Smith himself but often mentioned in footnotes to his works. These occasionally puzzlingly discrepant transcriptions are due to the hearing, understanding, speech-habits, and even prejudices of the various transcribers, abetted by the lack of any form of "law and order" in the English non-phonetic system of spelling then and now. The "democratic" system adopted by the new Handbook, in which all spellings are given equal rights, however, does not seem to me to serve the purpose of an index to John Smith's works. The reader of a book in quaint English that talks mostly about people with strange names not uniformly spelled needs help. I therefore aim to give that reader a consistently spelled form of the majority of the names, a key-spelling, to which all the variants are referred or cross-referenced. In some cases these will be the modern names in common use. Usually, I have chosen the spelling that Smith himself seems to have preferred. In addition, where it is at all possible, I have suggested a probable pronunciation as of the early 1600s.

While I am writing this, by courtesy of our colleague Professor Francis Jennings, now of The Newberry Library, I am able to make use of the relatively recent monograph of Eugene Green and Celia M. Millward, "Semantic Categories in the Names of Algonquian Waterways". I mention it here especially because it makes me hope that we may someday have more such studies, and at the same time prods me into wondering why modern linguists are so afraid of phonetics. The International Phonetic Association had more than 30 years ago (I have lost touch with them) devised a phonetic alphabet for, among other things, "working out romanic orthographies for languages written in other systems or for languages hitherto unwritten". Why such a study as the one I have just mentioned cannot put the sounds of Indian words down in the International Phonetic Alphabet really escapes me. A glance in Harrap's French-English Dictionary will tell you, extremely accurately, how an unfamiliar French word should be pronounced, thanks to the International Phonetic Alphabet. Is there a sound reason why authors of linguistic monographs should not avail themselves of this scientific system instead of higgledy-piggledy makeshifts ultimately derived from nineteenth century American dictionaries?

So much for general phonetics. In this paper and in the Index for John Smith's Works, at least so far as Indian names are concerned, I am planning to use key-spellings based on standard, more-or-less educated English pronunciation, with the stress (where guessable) indicated by underlining syllables. Under these circumstances, whether you say "can't" or "cahn't" is not important, as long as you don't say "cain't".

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deest
"not there, not specifically mentioned"

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G&M
see Green, 1978.

GH
see John Smith, 1624.

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JS
see John Smith.

mod.
"modern"

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perh.
"perhaps"

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/
"and or"

TENTATIVE LIST OF KEY-SPELLINGS

Note that the references are primarily for identification, and are not intended to be exhaustive.

ACCOMAC, VA. PLB 1971. Hbk 1907-10, I, 7-8. Hbk 1978 248. "Other-side place."

ACCOMAC, MA. JS GH 205. Hard by mod. Plymouth.

ACCOMINTICUS, ME. JS GH 205. Hbk 1907-10, I, 8. Hbk 1978, 169. Eck. 179-81. G&M 1978, 421.

AGAWAM, MA. JS GH 204, 205. Hbk 1707-10, I, 21. Hbk 161 (map), 169. Prob. near mod. Ipswich.

ANDROSCOGGIN (river), ME. JS GH 205 has "Anmoughcawgin", and the great variety of spellings cited in Eck. 147-8 seem to confirm the identification. See Hbk 1978, 146.

APOKANT, VA. PLB 1971. Hbk 1907-10, I, 70. Perh. "tobacco plenty-place."

APPOMATTOC, VA. A concession to mod. toponymy. PLB 1971. Hbk 1907-10, I, 70. Hbk 1978, 268. Important tributary mid. James R. and village/tribe. G&M 1978, 421, "river makes a bend."

APPOMATTOC, VA. PLB 1971. JS True Relation, sig. $C1^{V}$ only; on or near the Rappahanock R.

A spurious entry or a chance encounter with some of the foregoing tribe?

ARAHATEC, VA. PLB 1971. This simplified spelling is based on Robert Tindall's map of 1608(?) and Gabriel Archer's "Relatyon" of 1607. The modern spelling for the area is Arrohattoc, based on Smith's usual spelling. There seems to have been a breathing-sound at the end of the first syllable, giving rise to a frequent transcription with Ars-.

AUCOCISCO'S MOUNT, ME. JS GH 205. Notable only for the phonetic accuracy of Smith's transcription, mentioned in Eck. 169.

CHESAPEAKE, VA. Bay, tribe, and village, as now spelled. JS True Relation, sig. $C1^{V}$, "Chesipiack", reflects the etymology better, as does George Percy's "Chesupioc" (JV, I, 135).

CHICKAHOMINY river and people, VA. A concession to modern toponymy. PLB 1971. Hbk 1907-10, I, 259-260. Hbk 1978, 268. Despite the wide variety of spellings, there are no substantial variants; yet the meaning is still uncertain.

CHISKIAC, VA. See Kiskiac.

KECOUGHTAN, VA. PLB 1971. Hbk 1907-10, I, 670. Hbk 1978, apparently JS's preferred spelling, there is an illuminating variant in George Percy's "Relacyon" (MS, ca. 1625), "Kekowhatan", which is mentioned again below, under "Powhatan." The meaning "great town" that seems generally accepted is borne out by William Strachey, "the Seat sometymes of a thowsand Indians ... upon the death of an old Weroance of this place ... yt is said Powhatan ... stepped in and conquered the People" (Historie, 67-68), only to have Sir Thomas Gates take it away again.

KENNEBEC R., ME. A concession to modern toponymy. JS GH 205, "Kenebecka". Hbk 1907-10, I, 672-3. Hbk 1978, 146-7. "Long [or large], still water." Eck. 142-3.

KISKIAC, VA. PLB 1971. Hbk 1907-10, I, 286, "Chiskiac." Hbk 1978, 268. The spelling with "Ch-" is puzzling, even in the face of the variant "Cheesecake". If the initial k-sound was palatalized (at least by some Indians), why not the second?

KUSKARAWAOC, MD-DE. PLB 1971. Hbk 1907-10, I, 373 ("C-). Hbk 1978, 244, 250. "Place of making white beads." The reference in Hbk I, 373, to the variant "Kuscaranaocke" is mistaken on two counts, and is a mere JS misprint for -waocke".

KUTTATAWOMEN, VA. (Unattested spelling and suggested stress.) PLB 1971. Hbk 1907-10, I, 374. Hbk. 1978, 258, 268. There were apparently two villages of the same name, both on the Rappahanock River (JS True Relation, sig. $C1^{v}$, for the lower one; JS Map, 6, for both). See JV I, 185, and II, 341; the stress indicated is an informed guess.

MASSACHUSETT, MA., tribe, mount, etc. JS Description of New England, 8. Hbk 1907-10, I, 816-17. Hbk 1978, 170-1, 174, 187. It should be noted that the name Massachusett is now applied to the group of eastern Massachusetts dialects that includes Natick, into which John Eliot translated the Bible 300-odd years ago.

MATINICUS, ME. JS GH 205. Eck. 97, an island off Pemaquid.

MENASCOSIC, VA. PLB 1971. JS 1612 map of Virginia only, and impossible to place exactly. It is a convenient "key-spelling", however, to which to refer Manosquosick, Oraniock, and Ozenick--all in Chickahominy territory.

METINIC, ME. JS GH 205 ("Metinacus"). A concession to mod. toponymy; adjacent to Matinicus, but in a distinct group. JS may have misplaced the ending -us.

MONACAN, VA. PLB 1971. Hbk 1907-10, I, 930-1. Hbk 1978, deest. This compromise spelling first appears in JS Map of Virginia, 4 (JV, II, 339).

MONHEGAN ISLAND, ME. JS GH 205 ("Monahigan"). A concession to mod. toponymy. See Eck. 103-4 for an analysis of the name.

MORAUGHTACUND, VA. PLB 1971. Hbk 1907-10, I, 949. Hbk 1978, 268 (with mention of the Totuskeys!). Site on or near Moratico River, Richmond Co. Identity of name with the Moratuc tribe resident on Roanoke River in N.C. is suggested.

MORINOGH, VA. PLB 1971. Village in Chickahominy territory, perhaps the name of a cawcawwassough (see JV I, 178, and II, 334).

MOSHOQUEN, ME. JS GH 208. A tribe subject to Bashabes. Eck. advances the supposition that the reference is to the "Mawooshen" discussed in Samuel Purchas, Pilgrimes, IV, 1873-5 (London, 1625), "but nothing is known of the word" (Eck. 166).

MOYAONES, MD. PLB 1971. Hbk 1907-10, I, 953. Hbk 1978, 250 ("or ... Accokicke"). A tribe/village inimical to Powhatan. The name may be a mistaken transference and alteration of the following.

MOYOMPS, VA. JV II, 267, doubtful name of a tributary tribe of Powhatan on the west bank of the Potomac, more or less opposite Moyaones. Village sites are marked on JS's 1612 map on both sides, but only the one on the east side is given a name. For further details see my Pocahontas and her World, pp. 25, 185, and 259 n. 3.

MUSCONGUS, ME. JS GH 208 (misspelled "Nuscoucus"). Off mod. Bristol. For an interestingly detailed discussion, see Eck. 88-91.

NACOTCHTANKE, MD (D.C.?). PLB 1971. Today's "Anacostia." Hbk 1907-10, II, 8. Hbk 1978, see Index for the evolution of the spelling.

NANSATICO, VA. PLB 1971 (see s.v. "Nantaughtacund"). Hbk 1907-10, II, 24 (under both spellings). Hbk 1978, 268 (one heading). The concession to mod. toponymy here is primarily based on the MS annotation to JS True Relation, sig. $C1^{v}$ (JV I, 185n.) which corrects "Nantaugs tacum" to read"--ntsattaqunt".

NANSEMOND, VA. A concession to mod. toponymy. PLB 1971. Hbk 1907-10, II, 24. Hbk 1978, 268 (with a guess that it may be identified with the Tripanicks tribe mentioned in Ralph Lane's narrative of the Ralegh N.C. colony in 1585-6).

NASKET POINT, ME. Two locations: (1) JS GH 205, "Nusket", which marks the eastern boundary of Penobscot Bay; see Eck. 205-206. (2) JS GH 208, "Nassaque", the long, narrow point opposite Bath now called "Nasket", probable only, see Eck. 138.

NAWNCUTOUGH/NAWNAUTOUGH, VA. PLB 1971. Mentioned only because it is the sole name on the 1612 map of Virginia of ambiguous and unconfirmable reading. Hbk 1907-10, II, 47, "-au-". Hbk 1978, deest.

ONANCOCK, VA. A concession to mod. toponymy. PLB 1971. Hbk II, 122. Hbk 1978, 248. No substantive variants.

OPANIENT, MD. PLB 1971. Hbk 1907-10, II, 137, "Opament" is a misreading.

ORANIOCK, VA. PLB 1971. There is confusion about the name of this villabe/tribe due to both English penmanship and Indian pronunciation. MS "-r-" and "-z-" can easily be confused, while an indistinct "-r-" could be heard as an "-n-". Thus Ozenick must be the same as Oraniock (due to JS's map and text), and probably is the same as Onanye.

PAKANOKICK, RI. JS GH 208. Hbk 1907-10, II, 275. Hbk 1978, 175, with an informative paragraph on history and spellings.

PAMUNKEY RIVER, VA. PLB 1971. A concession to modern toponymy, used also for the tribe. Early English

transcriptions point to a pronunciation "Pa-MAHN-kee", for whatever that may be worth. Hbk 1907-10, II, 197-199 ("Pamavuke" is not a variant; it is a misreading of contemporary English "secretary" hand for Pamaunke). Hbk 1978, 250, 268, and see Index for various references to possible non-Algonquian origin for the tribe.

PASPAHEGH, VA. PLB 1971. JS's most common spelling, although there are said to exist 50-odd variants (Tindall's spelling "Paspaheagh" points to a rhyme with "plague" or "pray" with a final unemphatic "-h" (the variant "Pasbyhays" shows that the value of "-gh" was not "zero"). Hbk 1907-10, II, 206-7. Hbk 1978, 95, 269. George Percy's account of his own murderous foray against a Paspahegh village during the winter of 1609-1610 transcends in content, if not in language, Homer's epic of Greek barbarity.

PATAWOMECK, see Potomac.

PATUXET, MA. JS GH 208. Hbk 1907-10, II, 211. On or near the site of mod. Plymouth, MA. Hbk 1978, 82 (the Pilgrim settlement was "in the former Pawtuxet territory").

PAWTUXUNT, MD. PLB 1971. Hbk 1907-10, II, 210-11 ("Pat-") Hbk 1978, 251. JS's spelling "Paw-" may indicate local pronunciation "Pah-"; "Pa-" points to "Pŭh-".

PEMAQUID (Pont), ME. A concession to mod. toponymy, with no substantial variants in early recordings. JS GH 205 (Pemmayquid). Hbk 1907-10, II, 223. Hbk 1978, deest. See Eck. 102-103 for an interesting analysis of the name.

PENOBSCOT, ME. JS GH 205 (penn-). Hbk 1907-10, II, 226-227 (with an extensive list of variants). Hbk 1978, 146-7, and see chapter on "Eastern Abenaki", by Dean R. Snow (137-147). Eck. also contains much material, pp. 1-3 and 190-193.

PISCATAWAY, MD. PLB 1971 (Pazatica). Hbk 1907-10, II, 262. Hbk 1978, 240-257 (many references). Key-spelling for Pazaticans.

POCOUGHTAWONAUCK, ?? PLB 1971. JV 240. Hbk 1978, 412 (brief mention). An unidentified non-Algonquian tribe, in the general region of the Great Lakes, shown on the Smith/Zúñiga map which will be reproduced in Smith's Works.

POTOMAC, river and tribe, VA. PLB 1971 (Patawomeck). Hbk 1907-10, II, 294. Hbk 1978, 269. The Potomac River seems to have divided the "Powhatan" tribes from the Nanticokes and the Conoys. A diligent study of the Potomac and the Potomacs is eminently to be desired.

POTOPACO, MD. PLB 1971. Hbk 1907-10, II, 294. Hbk 1978, 250 (the reference on p. 269 may be erroneous). Compare Potepaug, MA, not in JS.

POWHATAN, VA. PLB 1971. Hbk 1907-10, II, 299-303, Hbk 1978, 269, and elaboration in the chapter on "Virginia Algonquians", by Christian F. Feest, pp. 253-270. Powhatan was a place-name that became a nom de guerre of the "chiefe ruler" of the "monarchicall governement" prevailing in Virginia when the English arrived (JS Map, in JV II, 369), despite the misnomer contrived by Hbk 1907-10, of "confederacy", and Hbk 1978 admits the error. The Swiss have a confederacy, the Confoederatio Helvetica, but there was nothing about Powhatan's rule or system that calls to mind the presidents of Switzerland. One more bit of misguidance in the Hbk's is perhaps proper here: the pronunciation (hence, the meaning) of the name. Three of the earliest transcriptions are: "Poetan", "Pewhakan [for -tan]", and "Pohatan". Not one of these could possibly represent a first syllable to rhyme with "cow". Admittedly, the sound represented in English by the digraph "-ow-" could be as in "bow" or "row", and so on, but we can't be sure until we know what the word means. Since the name of the rapids in the James River near the village is recorded as Paqwachowng, and we have a town-name recorded as Kekowhatan that means "big town", I believe that "powah-town" is right for Powhatan, and indeed this makes more sense than to name a town a "waterfall," as the Hbk's are bent on doing.

RAPPAHANOCK, VA. PLB 1971. Hbk 1907-10, II, 354-5. Hbk 1978, 269. Obviously the same original name as Toppahanock (also Tap-). The form with "T-" first appears in 1607-8, in Smith, Archer, and Tindall, and was applied to a village on the James River, later known as "Quiyoughcohanocke". Smith also used it for the river, called today "Rappahanock", to which he was led a captive in December 1607, but an anonymous hand corrected this in ink to "Rapahanock" (JS True Relation, sig. $C1^r$, in JV I, 184). It might seem, then, that the difference was dialectal, with the "T-" form on the James and the "R-" on the Rappahanock, farther north. But (see immediately below), we have "Rassawek" as the Algonquian name for a non-Algonquian village north-west of Powhatan, and as the name for a temporary lodge up the Chickahominy River. Where no dialectal boundary can be drawn, it might be wiser merely to suggest that the English were uncertain whether they heard a "T-" or an "R-", and used either.

RASSAWEK, VA. PLB 1971. Hbk 1907-10, II, 355. Hbk 1978, deest. Compare Nassouac, ME (Eck. 138-9), with the same descriptive value, and see "Rassawek II" in PLB 1971.

SAGADAHOC (river and colony), ME. Generally accepted mod. spelling. JS Description of New England, 8 (-hock). Hbk 1907-10, II, 407. Hbk 1978, deest. Brief mention in Eck. 129, and further details under "Saco River", 171-3, pronounced "Saw-co". Based on a root meaning "outlet", the first syllable was most likely sounded "Sah-", perhaps nasalized.

SASQUESAHANOCK, see Susquehanna.

SECOWOCOMOCO, MD and VA. PLB 1971. Hbk 1907-10, II, 495. Hbk 1978, 250. Perhaps the same name as Strachey's Cecocomake (near Weanoc on the James), but the same place as "Sacayo (etc.)", MD. Both may be compared with Strachey's "Segohquet" and Smith's "Segocket", ME. See Eck. 84-85 on the last mentioned.

SOWOCATUCK, ME. JS GH 205. Not in either Hbk, but Gordon M. Day in "Western Abenaki" (Hbk 1978, 148-150) summarizes what little is known about the general region and shows that the inhabitants were Almouchiquois (Armouchiquois), about whom little is known but that they were not Sokokis, as had been believed, thereby vitiating references to that tribe. For present purposes it should be noted that Sowocatuck had been condensed to "Saco" by 1623 (Eck. 172-173).

SUSQUEHANNOCK, MD-PA. A concession to mod. archeology. PLB 1971 ("Sasquesahanock"). Hbk 1907-10, 653-9. Hbk 1978, 362-367. The evidence presented on p. 363 that these Indians were conspicuously short is unconvincing. JS wrote that they were "very great", the Wighcocomocos "very little", and the Tockwoughes "continually tormented" by the Susquehannas.

TAUX (TOAGS), MD. PLB 1971. JS GH 58 ("Toags"). Hbk 1907-10, deest. Hbk 1978, 269.

TOPPAHANOCK, see Rappahanock.

WABIGGANUS, ME. JS Advertisements, 14. Hbk 1907-10, II, 885. Hbk 1978, deest. Cf. Eck. 228, "Wabígenek".

WARRASCOYACK, VA. PLB 1971. Hbk 1907-10, 916. Hbk 1978, 269, with the suggestion that this may be the same tribe as the Opossians of N.C. In view of Tindall's "Oriskayek" and the location of the latter this seems reasonable.

WEANOC, VA. PLB 1971. Hbk 1907-10, II, 926, with an assumption of an early tribal movement that is as amiss as the suggested location of the King's house. Hbk 1978, 269. The Weanocs need much more study.

WEROWOCOMOCO, VA. PLB 1971. Hbk 1907-10, II, 935. Residence of Powhatan, it was called Poetan by Tindall in 1607-8. Its location being broadly well-known, it seems strangely mislocated on the so-called "Kraus Virginia Map (1608)" in David B. Quinn, New American World, V, plate 138 (5 vols, New York, 1979).

WIGHCOCOMOCO, MD. PLB 1971 (lists four sites). Hbk 1907-10, II, 950 (one tribe). Hbk 1978, 251, 269.

YOUGHTANUND, VA. PLB 1971. Hbk 1907-10, II, 1001. Hbk 1978, 269. Apparently last mentioned ca. 1622 (JS GH 159).

Preliminary Observations on Ojibwa Place-Names

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The turn of the seventeenth century was a time of upheaval among the peoples around Lake Superior: the Ojibwa and the French advanced westward around the lake while the native Dakota Sioux retreated toward the prairies (Hartly, in press). Because the process was rapid and the belligerents were always separated by a broad buffer zone, the Ojibwa settled an essentially unpopulated territory. They had little cultural contact with the Dakota, and there is virtually no Siouan cultural or linguistic substratum evident now around Lake Superior. The rapid expansion of the Ojibwa into a vast land devoid of place-names demonstrates a mode of toponymy which was intensive, practical and unfettered by existing names. The large number of easily interpretable names in the area provides us with a strikingly clear picture of the ways in which the Ojibwa sorted significant elements out of a complex landscape and brought order into it--in other words, how they perceived the land. As a first step in understanding Ojibwa toponymy, this paper classifies and comments on about 475 names recorded by Gilfillan (1887), Verwyst (1916), Baraga (1878) and Jones (1919). All forms are in the orthography of Bloomfield (1958).

Because the Ojibwa economy was closely linked to the resources and transport afforded by the region's thousands of lakes, swamps and streams, it is natural that hydronyms should predominate. And because the Ojibwa depended so directly on their physical and biological environment, the named attributes of these waterways were generally topographically or economically significant features, e.g. a difficult rapids, or a lake abounding in whitefish. Names functioned as essential word-guides to a vast, intricate land, and there was little room for frivolity; commemorative, transferred and anecdotal names are few. As Hallowell (1967: 93) put it, "names...are a universal linguistic means for discriminating and representing stabilized points in space which enable the self to achieve spatial orientation". And, of course, place-names served as a means of communicating among people vital information about the land.

Though there is a considerable fluidity among grammatical categories in the formation of these place-names, it can be said for the purposes of classification that about half of them are based on nouns and half on intransitive verbs with inanimate subject (II). (The classification used here is shown in Table I.)

Of the latter, perhaps the most descriptive are those that take the form: root + medial suffix + II verb final (R[oot] M[edial] F[inal]). These names are coextensive with the body of terms used routinely to describe topographic

features. The root isolates some salient feature of the place and is modified by the medial functioning as a nominal classifier[1]. The name is placed in the class of II verbs by an abstract final[2], usually -a· which connotes spatial extent (see Denny: 1978):

pikkw-atin-a·-sa·ka?ikan

'rounded' 'hill' 'lake'.

The most common manifestation of an RMF name is as a verb in the conjunct mode with inflectional suffix -k and, optionally, the "relativizing" prefix ka·- which together produce a word with substantive function and a sense such as 'place where' or 'place which'[3]:

ka·-kino-kam-a·-k-sa·ka?ikan

'long' 'body of water' 'lake'.

The remaining II verb names are formed from noun (N) stems by the addition of II finals. About half of these are of the form (ka·-)N-kk-a·(-k) where -kk is a concrete final denoting quantity or extent, and N refers almost exclusively to a plant or animal:

ka·-wi·kwa·ssens-i-kk-a·-k-sa·ka?ikan

'little birch' 'lake'

ka·-name-kk-a·-k

'sturgeon' ('lake').

These forms are best rendered 'where there is/are a lot of N'.

Table I

	Number of Names	%
Inanimate verbs	211	44
RMF	115	54
N-ikka·	50	24
N-w	46	22
Nouns	197	41
Human	75	38
Animals, plants	73	37
Topographic features	49	25
Miscellaneous	68	15
Animate verbs	23	
ne- forms	12	
Not classified	33	
Total	476	100

The other N-final (II) names are formed from nouns by the addition of II concrete final -w 'be, be characterized by' (Denny 1978:298; Bloomfield 1956:84). Most of these take abstract final -i (or perhaps final Ø plus connective -i-), and occasionally occur with ka·- but never with -k:

ani·pi·ns-i-w-i-si·pi

'little elm' 'river'

ka·wiššš-i-w-i-si·pi

'muskrat or beaver lodge' 'river'.

The N-wi names mean 'place characterized by N' or 'place where there is/are N'. A common use of this construction is in naming a feature after an adjacent or confluent feature already bearing a 'normal' name:

makko-miniss-i-w-i-sa·ka?ikan

'bear-island' 'lake'.

Red Lake is

miskw-a·kami-wi-sa·ka?ikan

'red' 'water' 'lake',

and is drained by the Red Lake River

miskwa·kamiwi-sa·ka?ikan-i-w-i-si·pi

'red water' 'lake' 'river'.

A few N-w names take stative abstract final -an, usually with ka·- and -k:

ka·-miniss-i-w-an-k-sa·ka?ikan

'island' 'lake'

i.e. 'lake where there is an island'.

Most of the remaining names are simple or compound nouns referring to 1) human activities, artifacts and concepts: pakitawewin 'place where a fish-net is set', missa·pe-waciw 'giant's hill'; 2) animals and plants: ma·nko-sa·ka?ikan 'loon lake'; and 3) topographical features: maškik-onikam 'swamp portage'. About a quarter of these names can be considered "nonpractical" (i.e. not derived from any physical or biological characteristic of the place) and fall mostly in the "human" category. The rest denote salient features of the environment.

The noun category would be considerably enlarged were we to include in it names derived secondarily from verb-names.

For example, ka·kk-a·pikk-a· 'sharp/steep rock' is an II verb, though it usually occurs in place-names as ka·kka·pikka·-nk (with the locative suffix) or as ka·kka·pikka·-ns (with the diminutive suffix).[4] Similar blurring of functional distinctions between verb and noun occurs in the -kk-a· class. Note the following variations on a theme:

(N) a·sa·ti 'aspen'

(V) a·sa·ti·-kk-a· 'there are lots of aspen'

(V/N) ka·-a·sa·ti·kka·-si·pi 'river where there are lots of aspen'

(N) a·sa·ti·kka·-nk 'at the place of aspens'

(V) a·sa·ti·kka·-w-i-si·pi 'river characterized by the aspen-place'

The distinction between noun and verb forms is so fluid probably because it lacks much semantic significance.

There is a wide variety of names not accomodated by the two major categories (inanimate verb, and noun). Among these, the most colorful and expressive are the animate verbs:

nikik-pimikkawe-t 'where the otter makes tracks'

(The -t is a conjunct inflectional suffix.)

niššiwe-sa·ka?ikan 'murdering lake'

šinkwa·kko-sa·k-ipi·-t 'where the pine sticks up out of the water'

(The root sa·k- means 'protrude', and -ipi· 'water' is an animate verb concrete final.)

ka·-kipinewenittiso-si·pi 'river where he hanged himself'

ki·sk-i-site-pwa·n-sa·ka?ikan 'lake where the Sioux cut his foot'

'cut' 'foot' 'Sioux' 'lake'

atikka·mek-pa·pi-t 'Whitefish Point'

'whitefish' 'laughs'

These names distill the essence of a story into a trenchant, memorable phrase. They reiterate the capacity of Ojibwa place-names to isolate and express the key elements of a situation.

Likewise falling outside the major categories are names beginning with the element ne- 'peninsula'. Though these names always take superficially the form of nouns (usually in -nk), ne- shows the disconcerting faculty of combining not only with medials to form inanimate verbs, e.g.

ne-atin-a·-nk 'Gros Cap'
|
'hill'

but also with unaltered nouns, e.g.

ne-wi·ssa·kkote-si·pi 'Brule River'
| \
'burnt woods' 'river'.

What can we deduce about Ojibwa perceptions of the landscape from this overview of place-names? The primary function of place-names was as mnemonics for a large number of places in an intricate landscape. Recent psychological research supports this assertion: work at Stanford (Bower 1970:507), for instance, shows that one's recognition memory of a series of scenes is much greater if one describes or labels verbally each scene as he is first shown it, probably because the scene thus forms a verbal as well as an imaginal trace in the memory.[5]

The images represented by place-names are not, of course, elements of the physical landscape but rather of the perceived landscape which consists of discrete elements--selected by the mechanism of human vision and by one's experience of what is useful to discriminate--set against a less distinct background. This is the Gestalt concept of figure on ground.

Most Ojibwa place-names refer to distinct and useful images--unlike most modern names from European languages, such as Ann Arbor--but it is the RMF names which excel as verbal representations of figure on ground. (See Whorf's (1956:160-172) treatment of "Gestalt stem composition" in Shawnee.) The root represents the figure and the medial the ground:

pakone-škote-y-a· 'where there is a hole in the prairie'.
| \
'hole' 'prairie'

To illustrate the productive flexibility of various combinations of roots and medials in describing topography, we choose two roots (ki·ška- 'steep, cut off' and pa·ssa·- 'gap, break') and four medials (-kkamik- 'piece of ground', -a·pikk- 'rock', -atin- 'hill' and -tta·wank- 'sand') and the combined forms and glosses found in Baraga (1878):

ki·ška-kkamik-a·
'the ground is very steep'

pa·ssa·-kkamik-a·
'there is a ravine'

ki·šk-a·pikk-a·
'there is a cliff'

pa·ss-a·pikk-a·
'there is a...gap in a rock'

ki·šk-atin-a·
'there is a very steep hill'

pa·ssa·-tin-a·
'there is a low place between mountains'

ki·ška-tta·wank-a·
'there is a steep sand hill'

pa·ssa·-tta·wank-a·
'there is a small valley, of sand'.

In all of these examples, the root can be considered as a fault in or distortion of the ground represented by the medial.

To illustrate further the variety of ways in which several roots can "operate on" one medial, consider -a·mikk- 'bottom of a body of water'. (The first four citations are from Baraga, the last from Jones.):

ša·kaw-a·mikk-a·	'there is a long shallow place in the lake where the waves break'
'elongate'	

min-a·mikk-a·	'there are...shoals...(of sand or rocks)'
'isolated thing'	

(min- is the root of miniss 'island' and of min-a·kkw-a· 'there is a grove of trees'.)

ašiškiw-a·mikk-a·	'the river is miry at the bottom'
'mud'	

kip-a·mikk-a·-an	sa·ki	'the mouth of the river is shut up, is filled with pebbles'
'closed'	'river mouth'	

(Note that the plugging of a river mouth by a bar is apparently considered a state rather than a spatially extended situation because spatial final -a· is superseded by a stative -an.)

wa·n-a·mikk-a·	'pool'
'hole'	

One must not impute mystical powers to Ojibwa place-names, however satisfyingly efficient they may be at their task, but one can at least agree wholeheartedly with Edward Sapir (1921:244) when he says "Single Algonkin words are like tiny imagist poems".

NOTES

[1] In some cases, no medial is present:

ka·-pa·kw-a·-k	
'shallow'	('bay')
wa·ss-i-ciwan	
'foamy'	'flowing'

(-ciwan is a concrete II final.)

[2] The abstract final is sometimes preceded by a final with a more concrete sense, e.g.

eškwe-kwint-e-k

'last' floating'

i.e. 'last island'. The concrete final -kwint- requires II abstract final -e (connoting process) rather than the usual -a·. (Note initial change.)

[3] The root in some cases shows initial vocalic change: from the root miskw- we have

meskwa-tta·wank-a·-k-sa·ka'ikan

'red' 'sand' 'lake'.

[4] Sometimes ka·- is incorporated in the new name: compare

ka·-kino-kam-a·-k with

ka·kinokama·-ns 'little long lake'

[5] We should also note that the verbal label given a scene can "sculpt" one's memory of it: the elements of the scene may undergo simplification or other alteration in the memory to make it accord better with its given name (Slobin 1971: 103-104). To what extent can a place-name eventually alter one's conception of a place?

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Remarks on Golden Lake Algonquin*

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Introduction

The present paper is an examination of selected aspects of Golden Lake Algonquin, a dialect I began investigating in 1978. Since the start of my fieldwork, the very small number of speakers, all over sixty years of age and some in precarious health, has been both challenging and frustrating. Good native consultants are, as always, difficult to come by, and, with no more than a dozen speakers of the local dialect, the necessary checking and rechecking of the forms obtained is no easy task. In the light of these limitations, although I have made every effort to include herein only those forms I am reasonably certain of, it is perhaps inevitable that some inaccuracies remain.

I have worked primarily with two consultants, a man 73 years old and a woman 86 years old. The use of the local dialect by both speakers is, from all appearances, severely restricted, with English the normal medium of communication in the vast majority of everyday situations.

According to a member of the tribal council, the total number of inhabitants of the Golden Lake Reserve is approximately 275, including some individuals who were not born in Golden Lake. Of these, a rather large group comes from Maniwaki, and it appears that there are more frequent dealings between Golden Lake and Maniwaki than between Golden Lake and any other reserve. For this reason, and because reports such as Gilstrap (1978) suggest that the dialect spoken at Golden Lake is closer to the dialect of Maniwaki than to other Algonquin dialects, I have worked rather extensively with a 44 year-old woman who has lived in Golden Lake for twenty-four years but who is originally from Maniwaki. In addition to ethnological differences between the two groups, my data indicate that there are also various linguistic differences, some of which I will discuss herein. I should stress that I have not been to Maniwaki; my data are from my interviews with this one consultant, and it is in this restricted sense that I use the term Maniwaki Algonquin in this paper.

French Loanwords

According to Day (1978:790), Golden Lake was settled as early as 1807, and a reserve was established in 1870 (Day and Trigger 1978:794). The reserve is located in a section of Ontario where, in my experience, the use of French is not now widespread. In fact, a number of the people from the area that I have met speak, in addition to English, not French, but German. In this context, the continuing presence in Golden Lake Algonquin of a number of French loanwords merits some attention.

Those words in Golden Lake which appear to have been borrowed from French are the following:[1]

1.	GL bāzīn	'Basil'	Fr. Basile
2.	GL pɪyɛn	'Peter'	Fr. Pierre
3.	GL sōzɛp	'Joseph'	Fr. Joseph
4.	GL pʌnāswē	'Francis'	Fr. François
5.	GL nābɪyɛn	'beer'	Fr. la bière
6.	GL lʌgalɛt/nʌgalɛt	'bannock'	Fr. la galette
7.	GL kʌlʌpō	'toad'	Fr. crapaud
8.	GL dōlō	'bull'	Fr. taureau
9.	GL tʌrāntsō	'25¢'	Fr. trente sous
10.	GL nāpānēn	'flour'	Fr. la farine
11.	GL pʌdʌk	'potato'	Fr. pataque

Numbers 1 and 2 are reasonably transparent, necessitating only the postulation of a rule by which French l and r become Golden Lake n.

In numbers 3 and 4, French f becomes Golden Lake p. It is not clear to my why in number 3 French [ž-] appears in Golden Lake as [s-] rather than the expected [š-].[2]

In number 4, as in numbers 7 and 9, an initial French consonant cluster has been broken up by the intercalation of the vowel [ʌ] between the two elements of the cluster. Further, in my data the second vowel in number 4 is, rather surprisingly, not nasalized in Golden Lake, although it is nasalized in French. Finally, the Golden Lake form indicates that the French source had a final syllable in [we] rather than [wa].

In number 5, as in numbers 6 and 10, the French definite article la has been borrowed as an integral part of the Golden Lake word.[3]

Further, for reasons that are not clear, in number 6, the vowel of la is borrowed as a short vowel, but in numbers 5 and 10, it is borrowed as a long vowel.

In numbers 6 through 9, there are varying treatments of French l and r in Golden Lake.

Number 6 shows l ~ n alternation of the initial French l-, although the second French l of number 6 is retained intact, as is the French r in number 9. In numbers 7 and 8, French r has shifted to Golden Lake l.[4]

Number 10 appears to come from French la farine, but, in addition to the problem of the first [ā] already mentioned, the long [ē] is also troublesome. It is possible that this form was borrowed, not directly from French, but through the intermediary of another Indian language. Number 11 is one of the few words overtly commented on by my Golden Lake consultants as being a loan word from French. If this is accurate, the source can not be French patate, but rather a related form, presumably French pataque.

Nouns in Stem-Final -w

I would like now to discuss some interesting features of Golden Lake noun morphology. There are various classes of nouns, among them a class of nouns whose stem ends in -w. This -w is deleted word-finally, as in [kīzɪs] 'day, sun'. In the locative, the normal ending in Golden Lake is [ɪŋ], as in [kɪ̄gõsɪ̄ŋ]'fish' (loc.) and [wābɪgʊnɪ̄ŋ] 'flower' (loc.). For nouns in stem final -w, however, we typically find the ending [-ʊŋ], as in:

GL ʌdɪkʊŋ	'cow' (loc.)
GL ʌmɪkʊŋ	'beaver' (loc.)
GL kīzɪsʊŋ	'day, sun' (loc.)
GL māŋgʊŋ	'loon' (loc.)
GL mʌškīgʊŋ	'swamp' (loc.)
GL wānʌkwādʊŋ	'cloud' (loc.)

In the diminutive, the normal ending is [-ẽs], as in [ʌnībīšẽs] 'small leaf' and [wābɪgʊnẽs] 'small flower'. For nouns in stem final -w, we find the ending [-õs], as in:

GL ʌdɪkõs	'cow' (dim.)
GL ʌkɪkõs	'pail' (dim.)
GL ʌmɪkõs	'beaver' (dim.)
GL kɪnēbɪgõs	'snake' (dim.)
GL mɪtɪgõs	'stick' (dim.)
GL wāgākwʌdõs	'axe' (dim.)

Turning to the plural of nouns in stem-final -w, the situation is more complicated than that for the locative and the diminutive just presented. The normal Golden Lake endings are [-ʌg] for animate nouns and [-ʌn] for inanimate nouns, as in [ʌmɪkõsʌg] 'beaver cubs' and [sā'ɪ̃sʌn] 'beans'. Animate nouns in stem-final -w, however, are divided, apparently arbitrarily, into two classes. By far the most numerous one contains those nouns which take the plural ending [-wʌg]:

GL ãdēgwʌg	'crows'
GL ʌdɪkwʌg	'cows'
GL ʌmɪkwʌg	'beavers'
GL kāgwʌg	'porcupines'
GL kīžɪgātɪgwʌg	'cedar trees'
GL māŋgwʌg	'loons'
GL mɪtɪgwʌg	'trees'
GL mōzwʌg	'moose' (pl.)
GL wʌžʌškwʌg	'muskrats'

A small number of nouns, however, take the ending [-ōg]:

GL kɪnēbɪgōg	'snakes'
GL mɪtɪgōg	'logs (?)'
GL šɪŋgwākōg	'pine trees'

The situation is even more complicated for the inanimate nouns. Most take the plural ending [-ʊn]:

GL mɪnɪtɪgʊn	'islands'
GL nɪkādʊn	'my legs'

GL nɪškĭžɪgʊn 'my eyes'
GL wān∧kādʊn 'clouds'
GL wīkwēdʊn 'bays'

In a small number of cases, we find the ending [-ōn]:

GL mɪtɪgōn 'sticks'
GL mōz∧sɪnōn/mōz∧sɪnīn 'cartridges'
GL wāgākw∧dōn/wāgākw∧dʊn 'axes'

Further, a couple of forms even show the normal [-∧n] ending:

GL kīzɪs∧n 'days, suns'
GL m∧škīg∧n 'swamps'

In terms of the obviative, Golden Lake is one of the languages that inflects only for animate nouns, with the normal ending [-∧n], as in:

GL ∧bɪnŏǰĭš∧n 'child' (obv.)
GL ∧nɪmʊš∧n 'dog' (obv.)

The single example in my data of a stem-final -w obviative has the ending [-ōn]:

GL ∧mɪkōn 'beaver' (obv.)

If this account of stem-final -w nouns in Golden Lake is substantially accurate, it is clear that, in contrast to the locative and the diminutive, there is a great deal of variability in the plural. Although some of this variation may be due to inaccuracies on the part of my informants or to errors in my transcriptions, the existence of at least two classes of stem-final -w nouns appears reasonably certain.[5]

It is of some interest to compare this state of affairs with the data from my consultant who is originally from Maniwaki. As in Golden Lake, the normal locative ending is [-ĭŋ], as in [āzʊg∧nĭŋ] 'bridge' (loc.) and [čīmānĭŋ] 'canoe' (loc.). Nouns in stem-final -w, however, have the ending [-ōŋ]:

Ma kĭžɪgōŋ 'cedar tree' (loc.)
Ma mɪtɪgōŋ/mɪtɪgʊŋ/
mɪtɪgōkāŋ 'tree' (loc.)

Diminutives, typically ending in [-ĕs], as in [ʊškɪn∧wĕs] 'teenager' (dim.) and [tītāskwānĕs] 'carpentry nail' (dim.), have the ending [-ŏs] for stem-final -w nouns, as in Golden Lake.

Ma ∧dɪkŏs 'cow' (dim.)
Ma ∧kɪkŏs 'pail' (dim.)
Ma ∧mɪkŏs 'beaver' (dim.)
Ma kĭžɪgŏs 'cedar tree' (dim.)

Turning now to the plural, the normal endings are [-∧g] for animate nouns and [-∧n] for inanimate nouns, as in Golden Lake.

Animate nouns in stem-final -w are divided into two classes: those ending in [-w∧g] and those ending in [-ōg]. Most nouns end in [-ōg]:

Ma	∧dɪkōg	'cows'	GL ∧dɪkw∧g
Ma	∧mɪkōg	'beavers'	GL ∧mɪkw∧g
Ma	∧nɪn∧dɪkōg	'caribou' (pl.)	
Ma	kīžɪgōg	'cedar trees'	
Ma	m∧ndāmɪn∧škōg	'cornstalks'	
Ma	mɪtɪgōg	'trees'	GL mɪtɪgw∧g
Ma	mōzōg	'moose' (pl.)	GL mōzw∧g

A relatively small number end in [-w∧g]:

Ma	k̄āgw∧g	'porcupines'
Ma	k̄ādegw∧g	'crows'
Ma	mānamēgw∧g	'catfish' (pl.)

The two examples in my data for inanimate noun plurals show consistent use of [-ōn]:

Ma	m∧ž∧škōn	'weeds'
Ma	wāgwāk̄w∧dōn	'axes'

Maniwaki, like Golden Lake, inflects only animate nouns for obviation, with the normal ending [-∧n]:

Ma	∧nɪmʊš∧n	'dog' (obv.)

The only example in my data of a stem-final -w obviative noun has the ending [-ōn]:

Ma	mōzōn	'moose' (obv.)

In terms of nouns in stem-final -w, then, Golden Lake and Maniwaki are completely isomorphic only in the diminutive and in the obviative, with a good deal of divergence apparent both in the locative and in the plural.

Nouns in Stem-Final -y

As one can argue for a class of nouns in stem-final -w, one can also present evidence for a class of nouns in stem-final -y. Stem-final -y is deleted in word-final position:

GL	sēs∧b	'rope'
GL	∧sɪn	'stone'

Since the normal locative ending is [-ɪ̃ŋ], it is not diagnostic here.

Diminutives for the nouns in stem-final -y consistently show the ending [-ɪ̃s]:

GL	∧sɪnɪ̃s	'stone' (dim.)
GL	mōz∧sɪnɪ̃s	'cartridge' (dim.)
GL	sēs∧bɪ̃s	'rope' (dim.)
GL	w∧d∧bɪ̃s	'root' (dim.)

In the plural, we find the endings [-īg] and [-īn] for nouns in stem-final -y:

GL sēsʌbīg	'ropes'
GL šɪgīgʌwĕžig	'onions'
GL ɔškʌšīg	'nails'
GL wʌdʌbīg	'roots'
GL ʌsɪnīn	'stones'
GL mʌžʌškīn	'grass, hay, weeds'
GL mōzʌsɪnīn/mōzʌsɪnōn	'cartridges'
GL nɪnɪnǰīn	'my hands'

The one example in my data shows the ending [-īn] for the animate obviative:

GL ɔdʌbīn	'root' (obv.)

Here again, an examination of the situation in Maniwaki is instructive. In Maniwaki as in Golden Lake, word-final -y is deleted: [ʌsɪn] 'stone'. The locative is normally [-īŋ], as in Golden Lake, and is not diagnostic. The diminutive ending is [-ĭs], although I have only one example:

Ma mōzʌsɪnĭs	'cartridge' (dim.)

The plural endings are everywhere [-īg] and [-īn]:

Ma sēsʌbīg	'ropes'
Ma ɔškăžīg	'nails'
Ma ʌsɪnīn	'stones'
Ma mīžʌškīn	'grass' (pl.)

I have no examples for the obviative.

Unlike the case of stem-final -w nouns, then, nouns in stem-final -y show a great deal of consistency. Further, the two dialects are virtually identical in their treatment of nouns in stem-final -y, with the long vowel [ī] appearing in the examples cited for Golden Lake and Maniwaki in the diminutive, plural, and animate obviative.

Verb Morphology

In the final section of this paper, I would like to make a few brief comments about some aspects of the verb morphology of Golden Lake.

First, Piggott (1978:174-5) has reported that, for the second person plural of AI verbs, Winneway River and Rapide-Sept have the ending -nāwā corresponding to the ending -m in Odawa. Golden Lake here shows the ending -m, as do the forms from my Maniwaki consultant.

GL kɪnɪbm̄	'you (pl.) sleep'
GL kɪmīǰm̄	'you (pl.) leave'

Second, Piggott (1978:178-9) has discussed two patterns of stem-final vowel alternation in certain AI verbs in Maniwaki, verbs which show no such alternation in Odawa.

Golden Lake has both alternation patterns: [nɪbā-] 'sleep' illustrates the ā ~ ē alternation and [mājā-] 'leave' the ā ~ ī alternation.

GL nɪnɪbā	'I sleep'
GL kɪnɪbā	'you (sg.) sleep'
GL nɪbē	'he sleeps'
GL nɪmājā	'I leave'
GL kɪmājā	'you (sg.) leave'
GL mājī	'he leaves'

As Piggott has pointed out, not all ā- final verbs show this alternation. An example of a non-alternating verb in Golden Lake is [ʌndʌmɪtā-] 'work'.[6]

Finally, I would like to point out a curious feature in Golden Lake of the so-called passive paradigm. As can be seen from the partial paradigms given below, third person forms in both the independent and the conjunct are irregular. The TA stem of the first and second person forms is apparently replaced by the TI stem for third person forms. If this is indeed the case, then it would appear that the third person ending is [-ɪgʌnɪwɪ], a suffix whose relationship to the -aganiwi suffix discussed by Grafstein (1980) is unclear. I should also point out that the passive forms provided by my Maniwaki consultant are identical in all relevant respects with the Golden Lake forms given.

INDEPENDENT:	
nɪwābʌmɪgō	'I am seen'
kɪwābʌmɪgō	'you (sg.) are seen'
wābʌnǰɪgʌnɪwɪ	'he is seen'
wābʌnǰɪgʌnɪwɪwʌn	'he (obv.) is seen'
wābʌnǰɪgʌnɪwɪwʌg	'they are seen'

CONJUNCT:	
wābʌmɪgōyān	'I am seen'
wābʌmɪgōyʌn	'you (sg.) are seen'
wābʌnǰɪgʌnɪwɪǰ	'he is seen'
wābʌnǰɪgʌnɪwɪwāǰ	'they are seen'

NOTES

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[1] All Golden Lake and Maniwaki forms cited in this paper are given in a broad phonetic transcription.

[2] [ž] usually becomes [š] in initial position in Golden Lake; see Aubin 1979.

[3] I have no examples in my data of the incorporation of any other French noun determiner in Golden Lake loanwords.

[4] The only non-loanword in my data with l in Golden Lake [ʊlʌgɪž] ~ [ʊnʌgɪž] 'his intestine' from PA *weθakešyi.

[5] In the discussion following presentation of this paper, Richard Rhodes pointed out that there is often a great deal of variability in the plural from speaker to speaker even within a single dialect.

[6] It is also of some interest to note that the verb 'swim' appears in Golden Lake as [pɪmãdɪgē-], thus agreeing with the form given by Piggott for Rapide-Sept.

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On the Semantics of the Ojibwa Verbs of Breaking

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The purpose of this paper is to explore the semantics of a restricted class of verbs referring to the general notion of "breaking" in the Ottawa dialect of Ojibwa.[1] To understand the semantics of such verbs we must first understand the structure of the Ojibwa verb stem in general.

The structure of the Ojibwa verb stem is outlined in (1).

(1) (a) initial - (medial) - final

(b)

bmose			'he walks'
/bim	ose	w/	
along	walk	3	
initial	final		

dkonjge				'he bites'
/dakw	am-d	ig-e	w/	
grasp	with mouth	indef. obj.	3	
initial	final			

gī-bōknikešin					'he fell and
/gī	bōkw	nik-e	s-ǐn	w/	broke his arm'
past	break	arm	fall	3	
preverb	initial	medial	final		

While there are more variants than are shown here, a general understanding of the three separate types of morphemes, initials, medials, and finals, and their position in the structure of the verb is all that is needed for the understanding of what their contribution is to the semantics of the verb stem as a whole. The types of information carried in each part of the verb stem is summarized in (2).

(2) (a) Initials - Lexical information

(b) Medials - (i) body parts
(ii) classifiers
(iii) adverbials

(c) Finals - morphemic complexes
(i) means or instrumentality
(ii) agreement with the logical absolutive in gender
(iii) membership in abstract semantic verb classes,
e.g. stative, process, event, etc.,
locative, non-locative,
degree of control

Other semantic patterns, besides that shown in (2) exist, e.g. in verbs of motion, but all the verbs of breaking follow the pattern summarized in (2).

Our analysis of the verbs of breaking begins with establishing a distinction between verbs which we will call semantically nuclear versus non-nuclear. This distinction was suggested by Dixon (1971) as a way of combining componential and definitional semantic analysis. However, as we will see below, Dixon's approach will not work for Ojibwa. Instead we will use a somewhat different distinction using his terminology. In first approximation, we take nuclear terms to be those which show the least implicit adverbial elaboration. This is reflected in an assymetrical synonymy relationship between nuclear and non-nuclear terms. For example, consider the English verbs of breaking shown in (3).

(3) nuclear: break, tear, cut
non-nuclear: shatter, crumble, crush, smash, etc.; shred, puncture, perforate, etc.; slice, saw, pink, snip, etc.

If one were to substitute one of the nuclear terms for one of the non-nuclear terms, the sentence could still refer to the same class of events, although one might be liable to the charge of withholding information or of understatement, as in (4a). But one can not, except in special circumstances, substitute a non-nuclear term for a nuclear term and still refer to the same class of events, as in (4b).

(4) (a) (i) Lloyd dropped the glass and it shattered. (non-nuclear)

(ii) Lloyd dropped the glass and it broke. (nuclear)

(b) (i) Delaine broke the egg on the edge of the bowl. (nuclear)

(ii) *Delaine smashed the egg on the edge of the bowl..... (non-nuclear)

Now let us turn to a consideration of the Ojibwa verbs of breaking. A summary of the morphemes that we will be investigating is given in (5).

(5) (a) (i) Nuclear initials: bōkw-, bak-, bāšk- 'break'
bīgw- 'tear'

(ii) Non-nuclear initials: bās- 'be cracked'
bāk- 'have an opening'
bazagw- 'be scratched'

bakwe-	'have a piece missing'
bagone-	'have a hole'
bīs-	'be in pieces'
dādw-	'be split'
dāšk-	'be split apart'
gīšk-	'have a clean edge'
gāšk-	'be scratched'

(b) Medials: -ākw-, -jī- (meanings to be discussed below)

(c) Finals - most significant

	with inanimate object	with animate object	
(i)	-bid(o)-	-bin-	'act with one way motion, typically of the hand, i.e. push or pull'
(ii)	-išk(am)-	-iškaw-	'act with the body'
(iii)	-ah(am)-	-aw-	'act with an instrument'
(iv)	-sid(ō)-	-šim-	'cause to be in a state, typically by dropping'

The bulk of this paper will be devoted to analyzing the system of semantic distinctions reflected in the nuclear initials outlined in (5a(i)).

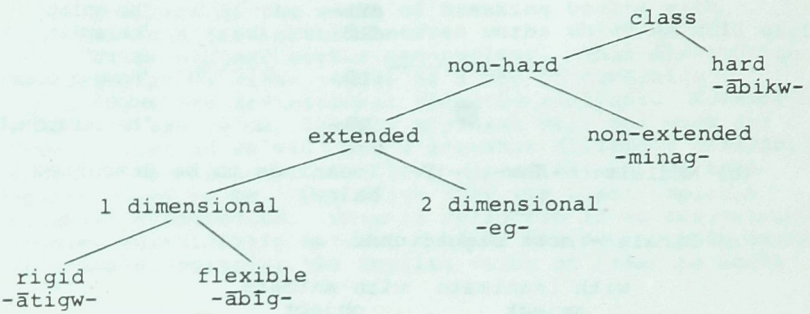
The four nuclear initials are: bōkw-, bak-, bāšk-, and bīgw-. The most striking thing about the use of these four morphemes is the limitation on their collocational possibilities. The kinds of objects that these morphemes can be predicated of are given in tabular form in (6).

(6) with -bido- 'push, pull'

object	verb	bōkw- bōkbidōd	bak- bkibdōd	bīgw- bīgbidōd	bāšk- bāškbidōd
mtig	'stick'	✓	*	*	*
sabāb	'string'	*	✓	*	*
pabwiyã	'cloth'	*	*	✓	*
wāwan	'egg'	?	*	*	✓

This distribution is immediately suggestive of the classifier system of Ojibwa, shown in (7).

(7) (a) from Denny (1976) CLS 12



(b)

	noun	gloss	one, one of them	two, two of them
(i) sticklike	mtig	'stick'		
	mōday	'bottle'	bežgwātig	nīžwātig
	žibīgnātig	'pencil, pen'		
(ii) stringlike	sabāb	'string'		
	wīnzis	'a strand of hair'	bežgwābīg	nīžwābīg
	bīwābkōs	'wire'		
(iii) sheetlike	wābōwyān	'blanket'		
	mzinhigan	'paper'	bežgweg	nīžweg
	pabwiyā	'cloth, shirt'		
(iv) globs, unclassified	nāgās	'glass'		
	bkwākod	'ball'	bežig	nīž
	wāwan	'egg'		
	mškimod	'bag'		

Based on these distinctions let us propose a set of preliminary definitions of the four nuclear morphemes. These preliminary definitions are given in (8).

(8) bōkw- break (said of one dimensional non-flexible objects)
bak- break (said of one dimensional flexible objects)
bīgw- tear
bāšk- break (said of three dimensional objects)

On closer inspection, however, it turns out that the morphemes bōkw- and bīgw- have a wider distribution than is suggested by the definitions given them in (8). For example consider the sentences in (9).

(9) nāgās 'glass' [3D],[-flex]

(a) ngī-bōksidōn nāgās — I dropped the glass and it broke in two.

(b) ngī-bīgsidōn nāgās — I dropped the glass and it smashed.

(c) ngī-bāšksidōn nāgās — I dropped the glass and it broke. [final state vague]

Here both are predicated of a three dimensional object. Similarly, in certain combinations with medials, bōkw- can be predicated of two dimensional objects and bīgw- can be predicated of non-flexible objects as shown in (10).

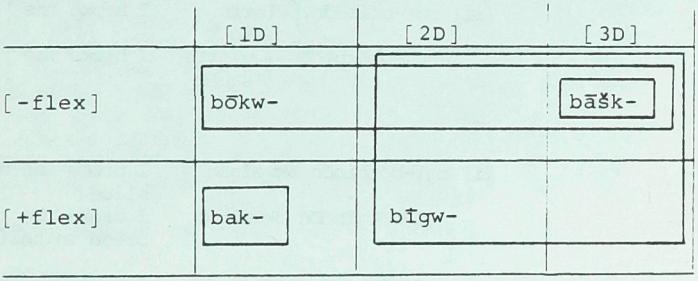
(10) bkwežgās 'cookie' [2D],[-flex]

(a) ngī-bōkjīsdōn bkwežgās — I dropped the cookie and it broke in two.

(b) ngī-bīgjīsdōn bkwežgās — I crumbled the cookie.

But there is one significant difference in the uses of bōkw- and bīgw- in the examples of (9) and (10). In both cases they pick up an added adverbial meaning: bōkw- adds the notion in the resultant state the object is in two significantly sized pieces (relative to each other); bīgw- adds the notion that in the resultant state the object is reduced to a number of pieces. Thus the real range of usage of the nuclear morphemes of breaking in Ojibwa can be summarized in a chart like that in (11).

(11)



Based on this chart and the observation of the adverbial accretions in the extended uses of bōkw- and bīgw- we arrive at the definitions in (12).

(12) (a) bōkw- break (said of one dimensional, non-flexible objects).
break in two, in half (said of two or three dimensional objects).

(b) bak- break (said of one dimensional, flexible objects).

(c) bīgw- tear (said of two dimensional, flexible objects);
break in pieces (said of two or three dimensional objects).

(d) bāšk- break (said of three dimensional, non-flexible objects).

Now let us turn to an examination of the role of the medials -ākw- and -jī- cited in (5b) above play in the semantics of the verbs of breaking. First we note that these forms come from Proto-Algonquian forms with classificatory and body part medial functions respectively, shown in (13a). However, in combination with the initials of breaking these morphemes have, in the clearest cases, adverbial meanings. Some examples are given in (13).

(13) (a) -ākw- < PA *aXkw 'classifier for useful hardwoods'
-jī- < PA *cye medial for 'belly'

(b) -ākw-

(i) ngī-bōkbidōn mtig — I broke the stick.
ngī-bōkwākbidōn mtig — I broke the branch off.

(ii) ngī-bkibdōn {wīnzis / sabāb} — I broke the {hair. / string.}
ngī-bkākbidōn {wīnzis / *sabāb} — I broke the {hair. / string.}

(c) -jī-

(i) ngī-bōkbidōn bkwežgan — I broke the head. [loaf/dry slice]
ngī-bōkjībdōn bkwežgan — I broke the (loaf of) bread in half.

(ii) ngī-bīgbidōn {mškimod / pabwiyā} — I tore the {bag. / cloth.}
ngī-bīgjībdōn {mškimod / *pabwiyā} — I broke the {bag. / *cloth.}

(iii) ngī-bāškbidōn nāgās — I broke the glass.
ngī-bāškjībdōn nāgās — I smashed the glass.

Nonetheless, even though these morphemes have adverbial functions, they still retain a measure of restriction on the shape of the object of which they may be predicated. Thus -ākw- can only be predicated of one dimensional objects,

while -jī- can only be predicated of three dimensional objects. Combinations of initials with these medials are not possible where such combinations bring these restrictions on dimensionality into conflict. A summary of the possible and impossible combinations are given in (14), (cf. the chart in (11)).

(14)

	bōkw-	bak-	bīgw-	bāšk-
-ākw-	bōkwākw-	bakākw-	*bīgwākw-	*bāškakw-
-jī-	bōkojī-	*bakijī-	bīgojī-	bāškijī-

The semantics of these combinations are of two types, those that refer specifically to the shape of the object broken and these that have a semantic notion of thoroughness. The semantics are outlined in (15).

(15) (a) shape

bakākw-	'break [of thin string-like objects]'
bōkojī-	'break [of objects that are 3D but have one dimension somewhat longer than the rest]'
bīgojī-	'tear [of the 2D flexible surface of a 3D object]'

(b) thoroughness

bōkwākw-	'break off'
bīgojī-	'break into lots of small pieces'
bāškojī-	'smash'

Now with respect to the finals and the role that they play in the semantics of verbs of breaking, we have observed that there are no peculiarities beyond the occasional fact that a particular form may have a pragmatic accretion to its semantics. Otherwise the meanings of the full forms are straightforwardly predictable from the semantics of the initial-medial plus the semantics of the final. Moreover the finals may be combined with the initials and initial-medial combinations freely, up to the point of inherent semantic conflict. Some examples are given in (16).

(16) Basic stems of breaking

(a) initials

simple	bōkw-	bak-	bīgw-	bāšk-
f				
i -bidō-	bōkbidōd	bkibdōd	bīgbidōd	bāškbidōd
n -aham-	bōkhang	bkahang	bīghang	bāškhang
a -išam-	bōkškang	bkiškang	bīgškang	bāškškang
l -sidō-	bōksidōd	bjisdōd	bīgsidōd	bāšksidōd
s etc.				

(b) with medials

-bidō-	bōkwākbidōd	bkākbidōd	---	----
-aham-	bōkwākhang	bkākhang	---	----
-išam-	bōkwākškang	bkākškang	---	----
-sidō-	---	bkāksidōd	---	----
etc.				

-bidō-	bōkjībdōd	---	bīgjībdōd	bāškjībdōd
-aham-	bōkjīhang	---	bīgjīhang	bāškjīhang
-išam-	bōkjīškang	---	bīgjīškang	bāškjīškang
-sidō-	bōkjīsdōd	---	bīgjīsdōd	bāškjīsdōd
etc.				

There is one known exception to the principle of free combination. It is the form *bōkwāksidōd. The reason for this is unclear at the moment, although it is probably related to the fact that there is another word, bkwesdōd which means what *bōkwāksidōd would mean in its most prototypical use, viz. 'drop s.t. and break a piece off'. The same is not true of the other forms with bōkwākw-. There are no clear synonyms for the other forms.

Finally, let us consider briefly the non-nuclear initials given in (5a(ii)) and repeated with fuller definitions in (17).

(17) (a) split

bāk-	'have an opening'
bās-	'be cracked'
bagone-	'have a hole'
dādw-	'be split/split [under control]'
dāšk-	'be split apart'
gīšk-	'have a clean edge/side' [pragmatically: : : cut]

(b) in pieces

bakwe-	'have a piece missing'
bīs-	'be in pieces/break/tear into pieces [under control]'

(c) marred

bāzagw-	'be scratched [of people and animals]'
gāšk-	'be scratched/scraped' [pragmatically: shaved [of people]]

(d) flattened

žašagw-	'be flattened'

This is probably not an exhaustive list of the initials of breaking, but these are all the forms which currently appear

in some source and for which I have been able to elicit a confirmation of present use.[2] The semantics of these non-nuclear initials is less well explored than that of the nuclear initials. However, one point of significance is known. When Dixon proposed the distinction of nuclear/non-nuclear he did so as follows:

> "Componential definitions of nuclear verbs are generated from systems of primitive semantic features; non-nuclear verbs are defined in terms of nuclear verbs (or of already defined non-nuclear verbs) utilising the full grammatical possibilities of the language in the formulation of these definitions." (1971:440-441)

The Ojibwa data show that such a position is untenable for the reason that in Ojibwa the nuclear terms of breaking follow a set of distinctions involving the classifiers as shown in (11). But at least some of the non-nuclear initials cross-cut these distinctions. For example consider the forms in (18).

(18) (a) bīs- 'break/tear into pieces [under control]'

(i) ngī-bīsdidōn pabwiyā — I tore the cloth into pieces. [2D],[+flex]

(ii) ngī-bīsākbinā bāgākhogan — I split basket splints. [1D],[+flex]

(iii) ngī-bīsjībdamwā bnešī bkežgan āpji go e-bātenig — I crumbled up some dry bread for the birds. [2D],[-flex]

(b) bakwe- 'have a piece missing'

(i) ngī-bkwesdōn mōkmān nāgan — I dropped the knife and broke a piece off. [1D],[-flex] I chipped the plate. [2D],[-flex]

(ii) ngī-bkwebdōn pabwiyā — I tore off a piece of the cloth. [2D],[+flex]

(iii) ngī-bkwežān bkweżgan — I sliced a piece off of the bread. [3D],[+flex]

None of the nuclear initials can be used of both [1D,+flex] and [2D,+flex] or [2D,-flex], as bīs- can be, (18a), nor can any be used of both [1D,-flex] and [2D,+flex] as bakwe- can be, (18b).

For this reason we have revised Dixon's idea of a two-way split in the structure of the verb lexicon to one of modification versus non-modification. The nuclear terms are semantically simplex. The non-nuclear verbs include some implicit adverbial notion.

NOTES

[1] I want to express thanks to Peter Hook and Pete Becker for their comments and suggestions on this topic. And in particular I want to express special thanks to Reta Sands for her time, energy, and thoughtfulness in providing a native speaker's insight into the sometimes very subtle distinctions between different words.

[2] Omitted are some initials, like banād- 'he ruined/useless',,,,,,, which can be used pragmatically to express breaking.

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Massachusett Phonology: A Preliminary Look

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This paper is a preliminary survey of Massachusett phonology presented in a comparative framework. A comparative approach is employed because a purely descriptive analysis based on the complex and inconsistent orthography used for the language would be a tour-de-force that at best would provide only tentative results that would have to be checked against the comparative evidence anyway. Accordingly, no attempt is made to set up a normalized transcription as a basis for analysis and comparison (as in Silver 1960; see the critical remarks in Goddard 1973a:731-2). A complete treatment of Massachusett phonology should be based on the entire original corpus (largely of translations of religious literature), including the dialectally and orthographically diverse documents written by native-speakers (Bragdon 1980, 1981). The present survey falls well short of this degree of completeness, which will not be achievable without a good deal of additional systematic study of the sources. It is based on the transcriptions of John Eliot, chiefly from his translation of the Bible as cited by Trumbull (1903); forms from this source are unreferenced or cited with "T" and a page number. Other sources are the Bible itself (cited by chapter and verse), Eliot's grammar (1666; cited from the 1822 reprint as "El. Gr." followed by the original page number), Josiah Cotton's vocabulary (1829; cited as "C" and the manuscript page number), and the native documents ("Nat" for those from the town of Natick; "MV" for Martha's Vineyard).[1]

1. Proto-Algonquian (PA) *p > Massachusett (Mass) /p/, spelled (p, pp, bp, b): pasuk 'one' < PA *pe·šekwi; kutappin, kutapin 'you (sg.) are there' < Proto-Eastern Algonquian (PEA) *kətapīn (subordinative); hashábp, hasháb, ahshop (Ps. 140:35, fide Siebert) (/ahšap/) 'net, flax' < PA *aʔlapya.

2. PA *t > Mass /t/, spelled (t, tt, dt, d): togkodtam 'he strikes (it)' < quasi-PA **tankantamwa; attóau, adtôau 'he buys' < PA *ata·we·wa; kod (preverb) 'be about to, intend to' < PA *katawi.

3. PA *č > Mass /č/, spelled (ch, tch, dch, j, dj, dtch): meechu 'he eats (it)' < PA *mi·čiwa; nukqutchtamup 'I tasted (it)' (1sg. preterite) < PEA *kwəčīhtam < PA **kweči?tamwa; wadchu 'mountain' < PA *wačiwi; quadjtog, quajtog 'when he tasted it' (3sg. changed conjunct) < PEA *kwēčīhtank. PA *č as the mutation of *t in the singular of inanimate nouns and in the conjunct (Goddard 1977) is leveled to /t/: meepit 'tooth' ← PA *mi·piči. After vowel syncope (§§29, 38) Mass /č/ is replaced by /t/ before /(h)s/ or /(h)š/, and at least in some cases /č/ plus /(h)s/ appears to be replaced by /tš/: kutchissittau 'he washes (it)', but kukgutshittomw8 'you (pl.) wash (them, inan.)' (Num. 31:24); petshau 'he falls in' < PA *pi·nči?le·wa. Contrast with the first pair

of forms the related derivative from Martha's Vineyard: adt kutchussummuohp 'where he was baptizing', but nukkutsummuam 'I baptize' (MV in Mayhew 1709, John 1:28, 26).

4. PA *k > Mass /k/, spelled (k, kk, gk, g, gg): kesuk 'sky' < PA *ki·šekwi; mukkée 'scab' < PEA *məkəy ← PA *mekyi; ogkomáe 'on the other side' < PA **aka·m-e·w-i; tannag 'crane' < PEA *tarēkāw (cf. Un talé·k·a).

The palatalized reflexes of PA *k are discussed in §§39-40.

The variant spellings of the plain stops and affricate are not random, but the patterns of preference for one or the other in different environments are complex. It is noteworthy that Eliot's rather frequent use of sequences of voiced and voiceless symbols (dt, gk, etc.) clearly shows an attempt to render non-English sounds by un-English spellings.

5. In initial syllables after short vowels voiceless stops are often written with geminate symbols or the equivalent (tt, kq, etc.) and sometimes with (h) plus a voiceless symbol: ahtuk 'deer' (< PA *atehkwa 'caribou'); ahquednet 'island (loc.)', beside ogquidnash 'islands' (< PEA *akwīntən [agent noun 'floater', in most languages 'canoe'] < PA *akwintenwi 'it floats' [> C, Sh]); puhpegk 'musical instrument' (< PA *pepikwani); pohkuhtimis 'white oak' (C 16), beside Narr paugáutemisk (misprint for paugáutemish; cf. paugautemissaûnd 'an oake canow' [Williams 1936:95, 107]) and Mun pǎkahki·mí·nšəy; wuhtuk 'branch', beside wuttuhq, wudtuk (T 199, 213) and Narr wúdtuckqun 'a piece of wood' (Williams 1936:33) (< PEA *wətəhkwən, *wətəhkwan). The variation in spelling suggests that the writing of hC in these cases may be an attempt to render some phonetic nuance rather than a real /hC/ sequence. Possibly the weakening of PA and PEA *a to Mun /ǎ/ and Un /ah/ can be compared (Mun ǎtó, Un ahtú 'deer'), but note that the Delaware words do not have a true /ht/ cluster (as implied by Siebert 1967:23) but the regular reflexes of PA and PEA *t.

6. PA *s and *š fall together to Mass /s/, written (s, ss; rarely z, zs): sampwe 'straight, right' < PA *ša·pw- 'through'; sequan '(it is) summer' < PA *si·kwanwi '(it is) spring'; wussénum 'have him as your (sg.) father-in-law (imperat.)' < PA *wešiθemi; wussaume 'too much' < PA *wesa·mi; nukkezeh 'I create him' < PA *neki·šiha·wa. The apparently consistent writing of (z) in the TA stem 'to create' may have been adopted in order to avoid the potential ambiguity of (sh) in the numerous forms in which the following vowel is syncopated: kezheau 'he creates (him)' < PA *ki·šihe·wa.

7. PA *h > Mass /h/, written (h, hh): metah 'heart', beside wuttanh8oash 'their hearts', < PA *mete·hi.

8. PA *m > Mass /m/, written (m, mm): m8swau 'he cuts (his obv.) hair' (Lev. 13:33) < PA *mo·nšwe·wa; pummee 'oil' < PEA *pəməy ← PA *pemyi. PA *Hm > PEA *hm > Mass /m/: wetuomash 'houses' < PEA *wīkəwāhmar < PA *wi·kiwa·Hmali; this /m/ is subject to word-final loss (§28).

9. PA *n > Mass /n/, written (n, nn): naum 'he sees (it)' < PA *ne·mwa; munnoh 'island' < PA *menahanwi.

10. PA *l and *θ fall together to PEA *r, which gives Mass /n/ when not in word-final position: kenunnum 'he carries (it)' < PA **keθenamwa (root *keθ- 'held firmly'); ninnuoh 'male (obv.)' < PA *elenyiwahi 'men (obv. pl.)'; nnih (T 86), unni (C 30, 109), 'it is so, it happens thus' (both for /ənāy/) < PEA **ərēyəw ← PA **eθ-ye·-wi (cf. EAb àle [Siebert 1975:302] < PEA **ərēw, showing the other dialectal Eastern Algonquian treatment of the common II final PA *-ya· ~ *-ye·; see §14).

Word-final PEA *r gives Mass /š/, written (sh): ku—ush 'I—you (sg.)' (independent indicative; e.g. kuppaumush 'I pay thee') < PEA *kə—ər < PA *ke—eθe (Goddard 1967:88, note 4; 94); -ash (inanimate plural; e.g. mehtugquash 'trees') < PEA *-ar < PA *ali; -sh 'you (sg.)' (imperative; e.g. monchish 'go (sg.)!') < PEA *-r < PA *-lwe; -ish (iterative conjunct; e.g. ásekesukokish 'every day' [T 28, 35]) < PEA *-īr < PA *-ili (Goddard 1974a:112-3). Mass /š/ is a new phoneme, also arising from the clusters that give Mass /hš/ (see §§24, 25); it also appears in loan words (e.g. shepsemesoh 'lambs (obv.)' [Gen. 33:19]) and, in the Martha's Vineyard dialect, in the demonstrative shanuh 'these (inan.)' (cf. yonuh 'this (inan.)', konuh 'these (anim.)'). For the contrast between Mass /s/ and /š/ note, for example, the following: us 'say (sg.) to him, them!' (phonemically /əs/) < PEA *əš < PA *eši (Bloomfield 1925:145, modernized); ush 'go (sg.)!' (phonemically /ąš/) < PEA *ār < PA *a·lwe (Goddard 1979a:119, note 44, with misprints). In Narragansett, however, though it is linguistically very close to Massachusett, the correspondent of Mass /š/ is often written (s) or (ss): cowequetúmmous 'I pray or intreat you'; nowépiteass 'my teeth'; mattacúcquass 'cooke or dresse' (imperat.); káusitteks 'hot weather' (i.e. 'whenever it is hot' [iterat.]; Williams 1936:14, 15, 41, 83).[2]

Massachusett continues the mutation of PA *θ to *š (Goddard 1977) as the mutation of /n/ to /s/. This mutation is regular in TA stems in the imperative for 'you (sg.)—him, them' (before PA *-i) and in theme-3 forms (with PA *-i, marking first person object), but occasionally omitted in the latter category: ken8s 'speak (sg.) to him, them' (ken8nau 'he speaks to (him)'); tohwhutch pogkésean 'why dost thou cast me off?' (pogkenau 'he casts (him) away, he divorces (her)'); pohquohwhus 'save (sg.) him', pohquahwusseh, pohquahwhuneh 'deliver thou me' (pohquohwhunau 'he delivers (him)'). Before the secondary AI final /-əwā/ that makes verbs of indefinite action from TA stems (< PA *-iwe·) mutation is optional: ken8s8waenin 'counselor', ken8nuaénuog (pl.). In the singular of inanimate nouns the mutation before the PA singular ending *-i is leveled out in Eastern Algonquian, PEA *r (< PA *θ) being restored from other inflected forms. In Massachusett these nouns in final PEA *r do not show the shift to /š/ found in the inflectional endings discussed above, having once again restored the

unshifted stem-final consonant (Mass /n/ < PEA *r): mush8n, mish8n 'boat', Narr mishoòn 'dugout canoe' ("an Indian Boat, or Canow made of a Pine or Oake, or Chestnut-tree"--Williams 1936:106) ← PEA *məhxōr ← PA *mehθo·ši 'wooden watercraft' (stem *mehθo·θ-); mutchán 'nose' ← PEA *məčār ← PA *mečya·ši (stem *-čya·θ-). The mutation of root-final PA *θ before the particle-forming suffix *-i is also leveled out, as generally in Eastern Algonquian: en (T 26), un (Nat) (both /ən/) 'to' (particle), wuttin, wuttinne 'thus' (preverb with third person prefix) < PEA *ərī ← PA *eši (*eθ-i), cf. Un lí, EAb ari (Râle 1833:550).

11. PA *w > Mass /w/, written (w, u): wék, week 'his house' < PA *wi·ki. PA *w usually drops after a long vowel if followed by a vowel in Massachusett: miáeog, miyawéog 'they assemble' (phonemic /mąā(w)īak/) < PEA *māwēwīwak (> Mun ma·we·wí·wak 'they attend church'). The conditions under which intervocalic /w/ is optionally retained are not known. An intervocalic PEA *w that comes to stand in word-final position in Massachusett as a consequence of the loss of a final syllable (§28) is not subject to being dropped by this rule but is treated exactly like a /w/ from a word-final PEA *w: ku——un(e)au 'you (pl.)——it', wu——un(e)au 'they——it' (ending /-ənāw/ < PEA *-ənēwa), as in wuttoghumuneau 'they ground it' (T 161), beside ku——unáoash 'you (pl.)——them (inan.)', wu——unaoash 'they——them (inan.)' (Matt. 13:51), with ending /-ənāąaš/ < PEA *-ənēwāwar. For PA *w after a consonant, see §13; for spellings of final Mass /w/, see §37.

12. PA *y > Mass /y/, written (y, i): ayum, ayim 'he makes (it)' < PEA *ayəm (> Un ayém 'he gets, buys (it)'). The treatment of intervocalic PEA *y in Massachusett exactly parallels that of PEA *w; it is usually dropped after a long vowel but optionally retained under unknown conditions: aôôn 'as I go' (/āąąn/) < PEA *ēyāyānē, beside ayôi 'where I go (/āyąy/) < PEA *ēyāya. For PA *y after a consonant, see §14; for spellings of vowel-plus-/y/ sequences, see §36.

13. PA *w is generally retained after a consonant;[3] the exceptions are unexplained: natwontam 'he considers (it), he meditates', beside wunnatinneahwhoh 'he seeks him', both with PA *natw- 'seek'. Mass /kw/ is spelled (qu, kqu, gqu, gw) before a vowel; before a consonant it is usually written (q, kq), though the indication of the /w/ is sometimes omitted: quttukqsheau 'it turns, bends', beside the conjunct form quttukshunk (T 143). Word-finally, the indication of the /w/ in /kw/ is usually absent but is found occasionally in Eliot and in native documents: mehtugq (T 336), mehtukq (Nat), 'tree' < *me?tekwi; mahchagq (MV), beside mohchak (Nat) 'swamp' < *maškye·kwi. The /w/ of word-final /kw/ is sometimes indicated in morphemes that are never subject to suffixation; this makes it unlikely that the occasional writing of word-final /kw/ in nouns could be explained as simply analogical to pronunciations or spellings of inflected forms in which the stem-final /kw/

is not word-final: ongq (T 17, 107), onkq (Jer. 49:30), 'go (pl.)!' < PEA *ākw < PA **a·kwe.

Conjunct endings in which word-final /kw/ would be expected show only apparent /k/ in Eliot, even when before the vowel of a further suffix: ohtunk 'he who has it' < PEA *ēhtākw < PA *e·ʔta·kwa; ohtunkeg 'those who have it' (cf. PEA *ēhtākwīk < PA *e·ʔta·kwiki); neg n8swuttahukqueôgig 'they which pursue you', nàg wánenehukqueagig 'those that do good to you', nôappèogish 'ye that are afar off', kenaau wonkinógish 'you that bend him (the bow, anim.)', yeug pish uhquanumogig 'these are the ones you shall abhor', all with the second plural conjunct ending -óg (El. Gr. 3; < PEA *-ēkw < PA *-e·kw-) followed by a participial ending -ig (3 pl. < PA *-iki) or -ish (2 pl., a Massachusett innovation that continues the inanimate plural or iterative ending PA *-ili). Experience Mayhew (1709), on the other hand, does indicate the /w/ of the expected word-final /kw/ in the second plural conjunct ending in the Martha's Vineyard dialect: noh matta waehheôogq 'he whom you (pl.) do not know' (John 1:26), nishnoh anukqueokq 'whatever he says to you' (John 2:5), teaquas wawussuttumokq 'what you worship' (contrasting with teaqus wawussuttumog 'what we (excl.) worship', with -og < PEA *-ēnk [Goddard 1980:154, §5.7]; John 4:22); but Mayhew does not have the /w/ in the third person conjunct negative: nag mat wadooshoogig 'the fatherless, those who do not have a father' (Ps. 10:14; for the expected *kw, from negative *w plus third person *k, see Goddard 1979:99-100). An hypothesis consistent with the attested forms would be that *kw was replaced by *k in the third person forms (negative and Class 2 TI) by analogy with the more general third-person *k, and in the dialect recorded by Eliot some other conjunct endings replaced /kw/ by /k/ by contamination. A more extensive collection of forms will be needed, however, before it will be possible to speak with confidence on this matter.

By a sound change of PEA date post-consonantal *w drops before PEA *ə (§29) followed by a labial (*m, *p, *w, *kw, and true clusters with these): nukkuhpunukup (/nəkəhpənəkəp/) 'he drew me out of the water' (Mayhew in T 42) < PA *ne-kwexp-en-ekw-epa(n-). This is a persistent rule in Massachusett and applies also across Mass /ə/ from PA *i (§38): nuttinonchimŭmun 'we tell', beside unnonchimwinneat 'to tell', < PA *eθa·čimwi- (middle reflexive *eθa·čimowa); togkuppinau 'he ties (him) fast' ← PA *takwipiθe·wa (§38). Siebert (1975:298) has noted the same change for Penobscot.

Word-initial PA *we- > Mass /ə-/ before a labial or Mass /k/ (but not before Mass /tY/ from *k--§39); in these environments /ə-/ is written (u-) in most cases, but (8-) or rarely (o-) before /w/: upponuh 'he put him'; ummokis 'his shoe'; ukkuttukquoh 'his knees' (1 Kings 8:54); 8weechauoh 'he went with them'. Before Mass /hp/ and /hk/ (§§15, 18) the *w of *wə- is lost in stems but usually retained in the third-person prefix: uhquan 'hook' < PA *wečkwa·ni (§15); "ŭhpu8nkash and ŭhpōonk" 'pipes and tobacco'

(C 12) < PA *wexpwa·kana; wuhkontash 'his legs'; wuhpit 'his arm'; but wuhpeteog, uhpeteog 'his rib'. The stem of PEA *wəm 'he comes from (there)' is spelled 8m(-), um(-), and w8m(-), perhaps indicating hesitation between phonetically regular /əm/ and morphologically regularized /wəm/. Apparently essentially the same change took place in the history of Eastern Abenaki, with the subsequent regular shift of *ə- to EAb /a-/; this accounts for why Caniba (as recorded by Râle) has a third-person prefix a- before labials and /k/.

14. PA *y drops after a consonant, as in all of Eastern Algonquian (Goddard 1980:147, §1.3): matchemungquot 'it smells bad' < PA *mačimya·kwatwi. Indirect continuations of post-consonantal PA *y are found in a few cases. Some noun stems in PA *-Cy are reshaped to PEA *-Cəy (Goddard 1980:147): ohke 'earth' < PEA *axkəy ← PA *axkyi. In the verb peyau (/pəyāw/) 'he comes' (cf. PA *pye·wa) the syllable /əy/ cannot be by sound law from PA *y (as assumed by Proulx 1980:3, 1980a:289; Pentland 1979:240), since there are no other examples of such a change and many counterexamples: paudtau 'he brings (it)' < PA *pye·ta·wa. The unhistorical /əy/ can, however, be accounted for as the result of an analogical back-formation from the form of the stem with initial change (an ablauting process that ordinarily replaced initial-syllable PEA *a and *ə by *ē and also applied irregularly in certain other patterns to a small number of stems). The changed form of PEA *pā- 'come' (whence PEA *pēw 'he comes') was PEA *pēyā- (e.g. in PEA *pēyāt 'he who came'), directly continuing PA *pye·ya·- (reflected in F pye·ya·ta 'he who came'): Mass payont 'he (when) coming' (T125, 235). From this changed stem Massachusett formed, as it were, a PEA **pəyā- and Abenaki formed a PEA **payā-; the divergence of these developments shows that they are independent (Goddard 1979:80-1 [where the alternate suggestion that the irregular change may not be old is to be rejected]; 1979a:114, note 30).

As reflexes of PA *nye·wi 'four' some Eastern languages have forms that point to the expected PEA *nēw, but others point to PEA *yēw: Mass yau 'four'. The languages pointing to PEA *n and those pointing to PEA *y are in each case distributed in two discontinuous areas (Siebert 1975:307); this and the lack of other examples make it very unlikely that a regular sound change of PA *ny- to *y- is involved, and the explanation of the forms with apparent PEA *y- remains unknown.

Proulx (1980:3, 1980a:291) assumes a development of post-consonantal PA *y to *iy in the II final reconstructed by Bloomfield (1946:91-2, 98, 110) as PA *-ya· (~ *-ye· before third-person *w), which is continued in some way by the Massachusett final that appears in such forms as the following: unni 'it is so' (C; see §10), menuhki 'it is strong', musqui 'it is red'; menuhkiyeuash 'they are strong (inan.), nniyeuash 'they are so (inan.)'; matta ne nano 'it is not so'; nag, unnag 'if it is so'; matta nan8g, matta unan8g 'if it is not so'; aunag, aunak 'that which is so; the way it is', manuhkag 'that which is strong', mosquag, moshquag 'that which is red' (El.

Gr. 13; T 18, 55, 71, 75, 86, 109, 170). Proulx's explanation incorrectly assumes that Eliot's (-i) is to be taken in its continental value, when it must be clear that all vowels in the Massachusett orthography have fundamentally their English values. The final (-i) is to be interpreted as English "long i" (see also §36); the verbs of this class have independent indicative non-negative singular /-āy/ and plural /-āyəwaš/ (with the same stem also in the preterite) but a stem in /-ā-/ in all negative and conjunct forms. The forms on the longer stem appear to continue PEA **-ēyəw sg., **-ēyəwar pl., a formation reflected in several other Eastern languages: Loup misk8ai 'it is red' (and other forms; Mathevet MS p. 33, in Day 1975); Mohegan squayoh ([skwâ´ɪō]) 'it is red', wombayoh ([wŏmbâ´ɪŏ]) 'it is white' (and other forms; Prince and Speck 1904:33, 40, 43, 44); Mahican wapajú 'it is white', m'chgajú, machgajú 'it is red' (Heckewelder 1887:4, 6); Unquachog squayo 'it is red', wampayo 'it is white' (Jefferson in Gallatin 1836); Nanticoke pschqueiju 'it is red', wapeju 'it is white' (Heckewelder 1887:5, 7); Powhatan opaivwh (in modern terms, opaiuwh) 'it is white', mahcatawaiuwh 'it is black' (Strachey in Wright and Freund 1953:117, 206).[4] It should be noted that Speck's recordings of Mohegan consistently indicate a stressed long vowel before the /y/ in these forms; the final syllable of the singular is lost by sound law in Massachusett and Loup (see §28). The origin of this formation, found in two discontinuous areas of Eastern Algonquian, is unclear; the other Eastern languages (Delaware and the Northern group) have a reflex of PEA *-ē as the final with all inflections in such stems (when not replaced by a completely different final), which could simply be by paradigmatic leveling if the allomorphy found in Massachusett can be reconstructed for PEA. (See Addenda, p.104.)

15. PA *hk, *xk̆, and *čk fall together to Mass /hk/, written (k, hk), or with (q) if followed by /w/: ohkuhk, ohkuk, ahkuhq 'pot' < PA *axkehkwa; uhquan, uhquŏn (C 9) 'hook, fishhook' < PA *wečkwa·ni 'hook' (cf. Siebert 1975: 341). Though the /h/ of /hC/ clusters (also in §§18, 21, 22) is sometimes not written it is clear that the clusters with /h/ were distinct from plain consonants since, for example, the expected clusters are never written with voiced consonant symbols. Some apparently spurious cases of orthographic (hC) are discussed in §5. An isolated unexplained case appears to show /hk/ from PA *k after a long vowel: mekonau 'he contends with (him)', mehkáusit 'he who contends with me', < PA *mi·ka·θe·wa 'he fights him'.[5]

16. PA *θk, *šk, and *çk fall together to Mass /sk/, written (sk, shk), or with (q) if followed by /w/: mosq, masq, mashq 'bear' < PA *maθkwa; wuske 'new' < PA *weški; wisq, wishq 'vessel' < PA *wi·çkwayi 'animal bladder, esp. as a container for oil or rendered fat'. Mass /s/ and /š/ do not contrast as first members of clusters and there appears to be free phonetic variation between [s] and [š] in what is here taken to be /sk/; a very similar case of indeterminancy occurs in Fox /šk/.

17. PA *nk > Mass /k/, falling together with PA *k: mogke 'large (pl.)' < PA *manki. The locative ending PA *-enki becomes Mass /-ət/, usually written (-ut) or (-it), in the dialect represented by Eliot's Bible and in the Martha's Vineyard dialect: neekit 'in my house', neekunonut 'in our house' (El. Gr. 11), mahteaquit 'at the swamp' (MV). In Narragansett and in the dialect of Natick itself, however, the locative is usually /-ək/: Mass (Nat) wutt-archard-umuk 'at his orchard' (with hyphens written for the spaces of the original), songkuppaguk 'spring (loc.)', mayik 'path (loc.)';[6] Narr nékick 'at my house'. In these dialects too, though, a locative in /-t/ also appears: Mass (Nat) othannat 'town (loc.)', ukkuhkunne(e)gkonnit 'at his boundary'; Narr keésaqut 'to heaven' (Williams 1936:135; Cowan 1969:31-3). What appears to be etymologically the locative ending is added to subordinative verb forms (Goddard 1974:320) to form the subordinative mode (or submode) that is generally used for sentential complements: nunn8nunát 'that I suck', k8wowomonnittinnanonut 'that we love one another', 8waobenaóut '(they) to mount up', 8weassunáoont '(they) to bear burdens' (T 92, 177, 184, 194). There are no examples of this mode in the Narragansett or Natick materials, but a possible example with locative /-ək/ for /-ət/ (in contracted form after a vowel) is wahtamunak 'to be known' (Eliot 1904:21), with -unak for the indefinite-subject subordinative ending that appears generally as -unat in the Bible and served Trumbull as an infinitive under which to enter the forms of a verb. The extremely restricted dialectal distribution makes it likely that the locative /-ət/ is a recent innovation, but its origin remains unclear; the late attestation of the locative /-ək/ in the eighteenth-century Natick documents would seem to rule out the hypothesis of Cowan (1969) that a replacement of /-ək/ by /-ət/ was taking place in Narragansett in Roger Williams' day and had previously been completed in Massachusett.

18. PA *hp and *xp fall together to Mass /hp/, written (p, pp, hp): pompu, pohpu 'he plays' and derived noun pohmp8onk (Indian Laws, T 129-30) < PA *pa·hpiwa; wutahpappin 'he sits on it', ne appapit 'that whereon he sits' < PA *axpapi- 'sit upon' with transitivized AI inflection (Goddard 1974:319, 1979:37).

19. PA *θp, *šp, and *čp fall together to Mass /sp/, written (shp, sp): nashpe 'with' < PA *naθpi; ushpunnumwog 'they raised (it)' < PA *ešpenamwa (with plural ending); pashpishau, paspishau 'he (sun) rises' < PA **pačpi?le·wa (Goddard 1974a:106).

20. PA *mp > Mass /p/; PA *nt > Mass /t/; PA *nč > Mass /č/; PA *ns and *nš fall together to Mass /s/: wuttup 'his brain' (C 6) < PA *wetempi (perhaps *wetempyi); for PA *nt, see §§2, 5; wunnutch 'his hand' (T 138) < PA *weθenčyi (the more usual word is wunnutcheg < PA **weθenčyikani); wussue 'seething, boiling', prenoun derived from the reflex of PA *wensowa 'he (kettle) boils'; muskesuk 'face, eye' < PA *meški·nšekwi.

21. PA *ht and *ʔt fall together to Mass /ht/, written (ht, t, tt): mehtauog 'ear' < PA *mehtawaki (but the Massachusett word is reshaped to have /-kw/ : mehtauogwash 'ears'); mehtugq 'tree' < PA *meʔtekwi (see §13).

22. PA *hč and *ʔč fall together to Mass /hč/, written (hch, ch, tch): mahche (perfective preverb and particle) < PA *me·ʔči 'completely, to exhaustion'.

23. PA *hs, *ʔs, *hš, and *ʔš fall together to Mass /hs/, written (ss, s, hs): ummissésoh 'his [older] sister' < PA *wemihsali, with the productive Massachusett diminutive ending -és and the regular shift of the obviative ending (cf. EAb nàməssis [Siebert 1975:299]); hassun 'stone' (T 27), ohsun- (MV in Mayhew 1709, John 2:6, ohsunohkuhquoh 'pots of stone (obv.)'), both presumably /ahsən/, < PA *aʔsenyi; assamau 'he feeds (him)' < PA *ahšame·wa; missi 'it is great', mohsag 'that which is great', < PA *meʔšye·wi (treated as described in §14). The /h/ in /hs/ is less frequently written than the /h/ of the other /hC/ clusters. It is conceivable that Massachusett, like Eastern Abenaki, Maliseet-Passamaquoddy, and perhaps Western Abenaki, had /ss/ for expected /hs/ in some cases (compare the cited words for 'older sister'), but given the nature of the orthography this cannot be demonstrated (see also §42). The writing of (hVs-) for /V̌hs-/ in 'stone' parallels the (hVsh-) for /V̌hš-/ in 'net' (§1).

24. PA *ʔl and *nθ fall together to PEA *hr, which gives Mass /hš/, written (sh, hsh, shsh): nushau 'he kills (him)' < PA *neʔle·wa (cf. Mun níhle·w); hashábp 'net' (§1); m8óhshog, m8ôshog (T 66), Narr mowáshuck (Williams 1936:42), 'iron' = m8- 'black' (< PA *mo·w-) + PA *-a·nθakw- 'metal' (earlier apparently 'flint'; Goddard 1973:5, no. 6; Siebert 1975:328, no. 57); môhshipsq 'flint stone' < PA **ma·nθ-i-peθkw- (with the expected mutation leveled out [cf. §10]; for PEA *hr, cf. Mun máhləs 'Flint').

25. PA *hl, *hθ, and *ʔθ fall together to PEA *hx (Goddard 1980:148), which gives Mass /hš/, falling together with PEA *hr (§24): nahnashau 'he breathes', written nahnahsh[in a marginal note (cut off in rebinding) in a copy of the Bible in the Boston Athenaeum (at Ps. 42:1), < PA *le·hle·wa (with reduplication; cf. Un lehəlé·x·e· 'he lives, breathes'); kushim 'your (sg.) daughter-in-law', wuhshimoh 'his daughter-in-law', < PA *keʔθemya (> Mun kxə́m); n8sh 'my father' < PA *no·hθa (> Mun nó·x).

26. The uncertainty earlier expressed (Goddard 1980:148, §2.4) about the treatment of the clusters that give Mass /hs/ and /hš/ was due to the existence of apparently unmotivated alternations between these two realizations: missi 'it is big' (§23) but mishe 'big' (prenoun) (T 270, where this distinction is correctly pointed out), taken as the reflex of PA *meʔši. It now appears, however, that there was widespread leveling of the mutation of root-final PA *θ to *š, especially in particles; hence the particle mishe is

a new formation (as if PA **me?θ-i) with the unmutated form of the root, while the verb missi directly reflects the mutation of the inherited allomorph. Another example is the treatment of the root PA *tahθ- 'so many': tohsuog 'they are so many (anim.)' (< PA *tahšiwaki), tohshinash 'id. (inan.)' (< PA *tahθeno·li, reshaped as if with *-ali), tahshe 'so many' (particle) (remade as if from PA **tahθ-i). Other cases of this leveling of mutation are in §§10 and 24. Accordingly, there must have been three distinct PEA clusters of *h plus a voiceless continuant: PEA *hs (< PA *hs and *?s) giving Delaware /s/ and Mass /hs/; PEA *hš (< PA *hš and *?š) giving Delaware /x/ and Mass /hs/; and PEA *hx (< PA *hl, *hθ, and *?θ) giving Delaware /x/ and Mass /hš/.

27. The Massachusett reflex of PA *nl is problematical. The other Eastern languages point to a PEA reflex *hr, which would give Mass /hš/, but there appear to be no Massachusett examples that confirm this development. Two TA stems with PA *nl show up in Massachusett with mutating /n/, but this can be explained as analogical (Goddard 1980:149); as with mutating /n/ from PA *θ the mutation is optional in Theme-3 forms (§10). The class 1 TI imperative singular has -ash (class 1b -ush) corresponding to PA *-anlwe, apparently never written with (hsh); this is most easily taken as having an analogical extension of the AI imperative singular -sh (§10). If this interpretation is correct, then the class 1 TI imperative singular can be reconstructed as PEA *-ah (class 1b *-əh; these would then be directly reflected by Delaware -ah, -əh), and PEA *h can be taken to be the regular word-final reflex of PA *nl in elements not subject to further suffixation (cf. Goddard 1979:143). Abenaki and the other Northern languages appear to have generalized PEA *-h as the mark of the singular imperative to the AI and the TA form for 'you (sg.)—me': WAb agida 'read it', agizi 'read', hli 'tell me' (Laurent 1884:117, 182; with the regular loss of word-final PEA *h). In Massachusett the same generalization of PEA *-h to the TA form is found: wadchaneh 'do thou keep me' (El. Gr. 32); and this ending -eh was further extended to the corresponding independent form: k8wadchaneh 'thou keepest me' (El. Gr. 28). It is possible, then, that Massachusett and the Northern languages shared an analogical extension of the TI imperative ending *-h to the TA form for 'you (sg.)—me'; subsequently the Northern languages continued this extension to the AI, but Massachusett extended the AI ending PEA *-r to the TI.

28. In word-final position PEA vowels and syllables ending in *m, *n, postvocalic *w, and *y are dropped; stressed syllables, those of monosyllables or following a single short-vowel syllable, are exempt and there is a fair amount of analogical restoration. Examples: muhpit 'arm' < PA *mexpetwini; quttōw 'log' (C 16) < PA *kwetawa·ni; wetu 'house' < PA *wi·kiwa·Hmi; ketass8t 'king', a stem in -am(w-) (cf. ketass8tamwog, pl.); muhhog 'body' < PEA *mahakay < PA *mahakayi 'skin'; ohtomp 'bow' < PEA ahtāpəy ← PA *ahta·pya; sontim 'chief' < PA *sa·kima·wa; manit 'god' < PA *maneto·wa;

menan, meenan 'tongue' < PA *mi·θanyiwi; wadchanunon 'if I keep you (sg.)', with ending -unon < PEA *-ərānē ← PA *-eθa·ne; neekun 'our house', with ending -un < PEA *-əna ← PA *-ena·ni; nutap 'I sit' < PEA nətapī ← PA *netapi. (For the origin of the word-final PEA vowels, see Goddard 1980:150-2).

The restoration or retention of word-final syllables by analogy is common in inflectional endings; among those affected in this way are the class 1 TI theme sign (-am, -um), the singular and indefinite-subject ending of the TI, subordinative, and secondary-object independent indicative (-un, -n), the conjunct second singular -an (< PA *-an), the TA third-person passive (-au < PEA *-āw < PA *-a·wa), and the third-person absolute (-u after various vowels, PEA *-w). In contrast, the TI theme-sign is dropped in derived agent nouns (see 'king', above), PEA *-āw (identical to the ending-complex of the TA passive) is dropped in the TA objective singular (nunnush 'I killed him' < PEA *nənəhrāw < PA *nene?la·wa), and the final syllable containing the third-person absolute ending is lost in the II verbs of the type discussed in §14 and perhaps of some other types; these cases in which the sound law does operate as expected make it likely that where it appears not to operate such final syllables were lost regularly but then restored by analogy. The models would have been other paradigmatic forms in which the syllables were retained before further endings and forms in which the final syllables were never lost because they were stressed: ayum 'he makes (it)' (§12); nussin 'I say it' < PEA *nəsīn (> Mun, Un nsi·n); nushau 'he is killed' < PEA *nəhrāw < PA *ne?la·wa; appu 'he sits' (1 Kings 1:17) < PEA *apəw < PA *apiwa; cf. wadchu 'mountain' (§3). The general retention of particle-final -e (< PEA *-ī ← PA *-i) can be explained in the same way: mahche (§22), like mishe 'big' and tahshe 'so many' (§26). (A different, but not incompatible, explanation is at the end of §43.)

Verb stems seem never to show synchronic alternants with lost word-final syllables, but such a pattern is common in nouns, as exemplified above. Nouns with apparently restored final syllables include: áskon 'a horn' < PA *e·škana; mukquoshim, mummugquoshum 'wolf' < PA *-a?θemwa 'dog' (probably after the regular anúm 'dog' < *aθemwa); sokanon (T 153), sookunnon (MV in Mayhew 1709, Ps. 105:32) 'rain' < PEA *sōkərān (matching the homonymous II verb; Mun só·kəla·n). The more common analogy in nouns, however, at least with those of certain shapes, is the loss of the stem-final syllable also in (remade) plurals and obviatives; this analogical syllable loss is optional, except perhaps in a few nouns, but with some stem types (notably those in PEA *-īkan or *-ākan) the shorter forms are more frequent: nunnutcheg 'my hand' (§20), pl. nunnutchegash, nunnutcheganash (Ps. 18:20, 24); ketass8t 'king' (see above), obv. ketass8toh, ketass8tamwoh (1 Kings 1:15, 22); meenan 'tongue' (see above), pl. meenanash (El. Gr. 10), but loc. (agwu) weenannuut '(under) his tongue' (MV in Mayhew 1709, Ps. 10:7). Stems showing this variation seem to have only their longer

variants before locative, possessive, and derivational endings; an exception could be otanit 'town (loc.)' (T 176; and other forms, T 111; Jer. 44:2), beside wutotanat 'to his city' (1 Kings 3:1, /-āt/ < PEA *-ēnk, the regular contraction of noun-final *-ay with the locative ending), but this could be an old irregular variation in the stem of this word (cf. Un o·t·é·nay 'town', with its irregular locative o·t·é·nink).

29. PA *e > PEA *ə > Mass /ə/, written (u, i, e, a) and before (ht) and (hch), or orthographic variants of these, also (ei, ee): mussunum 'he touched (it)' ummissinoh 'he touched him' < PA *mešen- TA, TI; ummittumwussoh, ummittamwussoh 'his wife, wives' (T 60; Gen. 32:22), possessed form of PA *metemwehsa 'old woman'; kehtoh, keihtoh 'ocean'; keht8nog, kuht8nog 'ship'; kehchissonkusq, kuhchissonkusq 'queen' (T 32, 321; Jer. 44:17, 18, 19), all with root reflecting PA *keʔt- (with mutation *keʔč-) 'great'; monagkeneehkōnat 'to weave' (C 84), with /-əhką/ from PA *-ehke· 'to make (X)' with umlaut of *e· to *a· before *n (see §39). The writings with (ei) and (ee), though the latter is very rare, suggest that (e) before /hC/ is to be taken as English "long e" indicating an [i]-quality reflex of PA *ə in this environment, as in Delaware and the Northern group; in Massachusett, however, the occasional writings with (u) show that this was only an allophonic tendency. In contrast, Mass (e) is to be taken as English "short e" indicating a fronted allophone of /ə/ when it appears as the writing of a /ə/ that is preceded by /p/, /k/, or /m/ and followed by /n/; this is the normal writing of /ə/ in this environment in initial syllables and occurs to a lesser extent in non-initial syllables and occasionally in other environments: kenugke 'among', kunnuke (MV in Mayhew) < PEA *kərəkī; kenunnum 'he carries (it)' (§10); menadtam 'he vomits (it) up' < PA *meθantamwa; menuhki 'it is strong' (§14); penushau 'he falls' < PA *peniʔle·wa; nequt 'one' < PA *nekwetwi.

Unstressed Mass /ə/ (as determined by a rhythmic stress pattern similar to that of other Algonquian languages) is subject to being dropped, apparently optionally; the resulting clusters are sometimes simplified orthographically, with plain (n) written for presumed [nn] as the realization of /nən/, for example: ukkeninuh, ukkinuh 'he carries, embraces him, them', ukkinunnóuh, ukkinóuh 'they carry him, them' (T 33; Gen. 33:4) < PA **keθene·wa (cf. §10).

30. PA *a > Mass /a/, written (o, a), less commonly (u): poggohham 'he threshes', preterite pogkuhhumup, < PA **pakahamwa. The class 1b TI final /-əm/, usually written (-um) or (-umm), reflects PEA *-əm, the regular replacement of PA *-am after stems in PEA *-əC (Goddard 1980:154, §5.6). The other cases of Mass (u) for expected /a/ are predominantly before /h/ and may reflect a sound law or a regular allophone in that position: muhhog 'body' (§28). Although the variation between (ohh) and (uhh) in the stem 'to thresh' shows that the situation is complex, the apparent selection

of the theme sign /-əm/ after (uhh) may indicate that this represents phonemic /əh/.

Mass /a/ is subject to syncope before prevocalic /h/: kuppohham 'he stops (it, a watercourse)', participle kobhog 'he who stops it' (with initial change replacing a short vowel by a long vowel) < PA *kepahamwa. Word-finally the sequence /-ah/ loses its vowel after another vowel; examples all involve the obviative ending /-ah/: 8wadchanuh 'he keeps him, them', with ending complex /-ąh/ < *-ąah < PEA *-āwah (contrast n8wadchanóog 'I keep them', with /-ąak/ < PEA *-āwak). Compare the treatment of *-īh 'you (sg.)--me' after TA stems in *-aw (§37).

The other short vowels, PA *i and *o, present difficulties and will be discussed after the long vowels. For PA *i, see §§37-42; for PA *o, see §§34, 37.

31. PA *i· > Mass /ī/, written (e, é, ee, ei) and in restricted environments (i): nek, neek 'my dwelling', wék, week 'his dwelling' < PA *ni·ki, *wi·ki; ween, wéin 'his marrow' < PA *wi·ni (> C, Sh wi·ni). Before Mass /sk/ Eliot usually writes the reflex of PA *i· as (i): kishke 'near to' < PEA *kīθkī (> Un kí·xki); wisq, wishq 'vessel' (§16); contrast peeskq 'nighthawk' < PA *pi·škwa; weesk 'elbow' (fide Siebert 1975:337) < PEA *wīškwan. Perhaps PA *i· in this environment tended to become Mass /ə/, or perhaps it merely had short allophones in this environment. Abenaki also seems to have /ə/ for PA *i· before /sk/; note Penobscot ppəskʷ 'nighthawk'; wə̀skʷan 'elbow' (Siebert 1967:18, 1975:337). The apparent weakening of the reflex of PA *i· under rhythmic conditions is discussed in §42.

32. PA *e· > /ā/, written (a, á, â, o, ea, au, ó, ai): pasuk 'one' (§1); naum 'he sees (it)' (§9); -óg (El. Gr. 3), -okq, -ogq (MV in Mayhew) 'you (pl.), conjunct' < PA *-e·kw- (§13); ohteau 'it is there' < PA *aʔte·wi; nuppaih 'I wait for him' < PA *nepye·ha·wa; naish, naush, násh 'see it (sg. imperat.)', presumably all /nāš/ ← PA *ne·nlwe (with the same treatment as the class 1 TI ending; see §27).

In Narragansett Williams frequently writes (e) in medial or closed syllables for the reflex of PA *e·: nummaúchenèm, nummaŭchnem 'I am sick' (Mass nummahchinam; PEA *mēhčīnēw); autèg 'where it lies' (Mass ohtag < PA *e·ʔte·ki); wésheck 'hair', wesheggan- 'wool' (Mass weshâganash 'body hairs'; cf. Mun wi·xé·kanal [Goddard 1971:144-5]); káusitteks 'when it is hot (weather)' (< PA *ke·šite·kili [§10]; Mass kâsittag, kosittag); peskhómwock 'they (thunder-beings) shoot thunderbolts' (cf. EAb [Râle] nepéskam 'I fire a gun at someone', presumably /nəpeskham/ [Goddard 1971:144]); taûnek 'crane' (Mass tannag [§4]); máunetash 'many things' (Mass monatash; pl. of agent noun from *ma·θe·twi 'there is a lot'); etc. A relatively broad phonetic range in the allophones of /ā/ is implied by the variety of ways in which it is written in Massachusett and Narragansett.[7]

33. PA *a· > Mass /ą/, written in a variety of ways. An essentially complete summary of the spellings of /ą/ and a following stop or /h/-plus-stop cluster is given in Goddard (1965:210). Before /t/ and /č/ (on) is nearly universal, but (un) is also found; before /k/ (un) is somewhat more common, beside the usual (on); before /p/ (am) and (om) are the common writings and (um) is rare. For writing /ą/ in other environments Eliot had available the explicit symbol (ô), but he usually employs a more ambiguous orthography (El. Gr. 3; the â mentioned there is very rare, if used at all in this function). Often (ó) appears instead, though this is supposed to be the explicit symbol for /ā/ (§32), and (u) is fairly frequently used, with or without an accent; the writing of /ąh/ as (uh) is common (§30). Before /h/-plus-stop(-or-affricate) clusters the nasalization and the /h/ are sometimes both written segmentally as (hn) or (hm). Before /m/, /s/, /š/, and /ą/ (au) is sometimes used, and before /m/ and /n/ there is sometimes (8). The writing of (i) or (iy) before a vowel is rare (ex. in §11). Many examples of Mass /ą/ are given in Goddard (1965). For the writing of this segment before /hk/, see the forms with reflexes of PA *a·hkw- 'intense' (T 107-9, 168-70). Other examples: nesausuk, nesáusuk 'seven' < PA **nyi·šwa·šekwi (loss of first *w unexplained); anóme, anomut, an8mut 'inside' < PA *aθa·m-; môNak, m8nak 'cloth' < PA **mya·θ-ye·kenw- 'ersatz hide'; womp- 'white' < PA *wa·p-; and in §§2, 6, 10, 14, 15, 18, 24, 28.

The failure to mark the nasalization of /ą/ by a segmental nasal symbol when the /ą/ precedes a stop or affricate is extremely rare in Eliot; the cases noted follow a nasal and precede the preterite ending -p(ann-) (as in El. Gr.): n8tinop 'I drew him out' (T 94); k8wehpumopanneg 'thou didst eat with them' (T 190); cf. nukkezheomp 'I have created (him)' (T 36).

34. PA *o· > Mass /ō/, usually written with an o-o digraph resembling an "8" turned on its side, here transcribed (8); this is defined by Eliot as having the sound in the English words moody and book (El. Gr. 2): mutt8n 'mouth' < PA *meto·ni; also §§8, 10, 25. Eliot also writes (o), which is apparently the preferred writing in certain words; in later sources (oo) tends to replace (8): sokanon (Eliot), s8kĕnon (C 7), sookunnon (Mayhew) 'rain' (§28); ponum, ponam 'he puts (it)' < PA *po·namwa (conceivably the spelling of this word was influenced by that of Latin pono 'I put down'); nuppohqun 'I break (him; bow)' (Jer. 49:35), nuppoohqun 'I break (him; law)' (C 40) < PA *po·xkwene·wa (with first person absolute inflection). The sequence /yō/ is usually written (yeu): nayeumuk assoh 'she rode upon an ass' (verb is '(he, obv.) carried him on his back') < PA **nayo·m- TA; in this verb and others with the same sequence, when the /a/ is replaced by /ā/ by initial change the /y/ drops (after a long vowel; §12) and the /ō/ has its usual spelling: neg na8mukqutcheg 'they who ride upon (them)'.

PA *o (not analyzable as *we) seems to be found in the sequences *ow and *okw (perhaps always from earlier *owk); as the morphophonemic shortening of *o· (medial *-oθ- beside noun stem *o·θ- 'watercraft'); and perhaps in a few words that show an unexplained alternation between *o· and *o or *we (*peponwi or *pepwenwi '(it is) winter' > C and Arapaho-Atsina; *pepo·nwi > other languages) (cf. Goddard 1979a:75). An apparent example of PA *o not belonging to one of these categories is in the following: ohk8n 'a skin', ohk8nie '(of) skin' (prenoun), < PA *-HkoLay (dependent noun stem; *Hk = *hk or *xk; *L = *l or *θ); cf. F mehkone·weni 'a blanket', ohkone·hi- AI 'have a blanket', K -hkoneeh 'blanket' (dependent noun stem); O nikkona·ss 'my blanket', -kkonay (medial); Illinois (Le Boullenger) ac8rai 'sa robe', nicoraī 'ma robe'; Powhatan matchkore 'a deerskin' ("a staggs skin").[8] As in this example, except in some cases of PA *ow (§37), the reflex of PA *o is the same as that of PA *o·: wadchanum8k 'keep it (you, pl.)' (El. Gr. 25), with ending ultimately from PA *-amokwe.

Two stems for which there is evidence for both PA *o and PA *o· or *we present problems. Mass wonkum 'greet him (imperative sg.)', wonkom8k 'greet him (imperat. pl.)' appears to show a stem /wąkəm-/, although the /ə/ is usually written with (o); this is indirectly but unambiguously shown by the reciprocal stem /wąkwətə-/: wonkquttehhettit 'when they greeted each other' (cited from a passage where the English is 'when we had taken leave of each other'; T 196), wonkquttuwonga[n]ash 'greetings'. These stems would regularly reflect PA *wa·nkwem- TA, *wa·nkwentwi- AI recip., but the other languages heavily favour PA *wa·nko·m-: F wa·ko·mowa, wa·ko·tamwa 'he gives thanks', ina·ko·me·wa 'he is related to him thus', ča·ki e·h-ina·ko·ti·yani 'every way that you are related'; C wa·hko·me·w 'he is related to him', ita·hko·me·w 'he calls him thus by way of relationship' (Faries, Bloomfield), but wa·hkom- TA (Wolfart), -wa·hkoma·kan (dependent noun) 'relative, fellow-tribesman' (Wolfart, Bloomfield); Sh nitela·ko·ma·ki 'I am related to them', la·ko·tamwa 'he has kin'; Un ǵnko·m 'greet him (imperat. sg.)', e·lankó·mak 'my relative'. Mass wehkom 'call him (imperat. sg.)', wehkumau 'he called (them)' appears to have a stem /wīhkəm-/ TA, but the TI wehquetum 'he asked for (it)', as if /wīhkwītəm/, is unexpected; cf. (Nat) wehquttum 'he made a request', presumably with the expected /wīhkwətəm/. Other languages point to PA *wi·hkwem- TA or *wi·hkom-: F wi·hkom- TA 'invite to eat', wi·hkoti·- AI recip.; Un nəwi·hó·ma 'I invite him to a memorial dinner'.

The symbol (8) is also used for /əw/ (§37) and sometimes for post-consonantal /w/: spogkep8au 'he bits (him)', < PA *sakipwe·wa.

35. In inflectional endings and ending complexes, and in some cases in dervation (but not with the pronominal prefixes), PA *o· resulting from contraction is eliminated. Stems or themes in *Cw followed by the animate endings PA *-aki (pl.) and *-ahi (obv. pl.) restore uncontracted /wa/:

anùmwog 'dogs' (cf. PA *aθemo·ki > K anemo·ki); aninwog 'they (anim.) rot' (cf. PA *aθeθo·ki > Mun alálo·k); /nə--əkwak/ 'they--me', as in n8wadchanukquog 'they keep me' (El. Gr. 29) (cf. PA *ne--eko·ki > F ne--eko·ki, Mun [nə--əkōk]). Before the inanimate plural ending PA *-ali, when the contracted *o· is eliminated the *w of the preceding *Cw is not restored, except in *kw: ogquidnash 'islands' (§5); tohshinash 'they (inan.) are so many' (§26); monatash 'abundant things' (§32); but mehtugquash 'trees' (§10). In the case of TA stems in *-aw and TI Class 2 themes (also in *-aw), uncontracted Mass /awə/ is restored: kutaninumoush 'I help you (sg.)' (/kətanənəmawəš/, a stem /anənəmaw-/ plus /kə(t)--əš/ [§10]; cf. PA *-o·θe from a stem in *-aw plus *-eθe, as in Mun kpə́no·l 'I look at you' beside kpə́nawi 'you look at me'); kutahtauun 'you (sg.) have it' (/kətahtawən/, a theme /ahtaw-/ plus /kə(t)--ən/; cf. PA *keta?to·ni > Mun ktáhto·n 'you put it' [Goddard 1979:72-3]).

A very similar elimination of PA *o· resulting from contraction is found in Cree, but with different results (Goddard 1979:195; note 3 to p. 73; to the list discussed there should be added the leveling of all variants of the Class 2 TI theme sign to Cree /a·/). The suggestion that the contraction of PA *Cw-aC to *Co·C was not of PA date and therefore that Cree and Massachusett are archaic in preserving the uncontracted sequences (Proulx 1980:7) cannot be entertained as a serious hypothesis in the absence of any account of the origin of the contraction in the languages that show it. Such an account would have to explain, among other things, the widespread agreement among the languages on which words are exceptions to contraction: F mahkwaki, O makkwak, Un máxkɔk < PA *maθkwaki 'bears'.

36. Sequences of vowel plus /y/ are spelled with diphthongs or with a single vowel symbol, in accordance with English orthographic patterns. Mass /ay/ is written (i), (ai), or (ay): wishquie 'vessel' (cf. §16) and ohk8nie 'skin' (§34), both prenouns made from stems in PA *-ay by the addition of the particle final -e; ayeu (/ayəw/) 'he is (there), dwells (there)', 1sg. nutt ai, nutt aih, < PEA *ayəw (> EAb àyo [Siebert 1975:349]). Mass /āy/ is spelled the same way as /ay/, perhaps with a tendency to favour (ai) to a greater extent than for writing the sequence with the short vowel, though (i) is certainly common and in fact appears to be the favoured spelling in certain words and morpheme sequences: piuk (probably /pāyakw/) 'ten' < PA *pe·yakwi 'one'; mishont8wai, mishont8wi (/məhšątəwāy/) '(that) I cry out' (T 58, 160) < PEA **məhxātəwēya < PA **me?θ-a·towe·-ya·n-; see also §12. It is possible that (i) before a vowel represents simply /ā/ in some cases, since (i) and (iy) are attested as spellings of prevocalic /ą/ resulting from the loss of *w (§§11, 33), where it seems unlikely that an actual /y/ could be present. Mayhew sometimes has (oi) for /āy/: pohki (Eliot) 'it is clean', pohkoi (MV in Mayhew 1709, Ps. 19:8) < PEA *-ēyəw (§14). At least word-finally Mass /ąy/ is written (-oi) and (-ôi), and

probably also (-i): ayôi, áyoi, áoi (/ā(y)ąy/) 'where I go' (§12). Prevocalically Mass /əy/ is written (e), (é), (è), and--especially in initial syllables--(ey), and word-finally it is (e), (eh), and less commonly (ee) or (ei): peyau (/pəyāw/) 'he comes' (§14); weyaus (/wəyawəhs/) 'flesh' < PEA *wəyawəhs, or perhaps PEA *wəyōhs with undoing of the contracted *ō (cf. §35), < PA *wi·yawehsi 'meat' (> O wi·ya·ss, Sh wiyaw$^{?}$θi, EAb wàyohs [Siebert 1975:356], Mun wǎyó·s); ken ápean (/āpəyan/) 'thou that sittest' < PEA *ēpəyan < PA *e·piyani; noh m8hhukque 'he that eateth me', howan a8que 'who is my adversary?' (stem /ayōh-/), noh nógqueh 'who seeth me' (stem /nāw-/ with contraction), pish ken waseenumukqueh 'thou shalt be my son-in-law' (lit. 'you (sg.) shall be the one who has me as father-in-law'), all conjunct participles in /-əkwəy/ 'he who--me', as if from PEA **-əkwəya (replacing the inherited ending PEA *-īt); áyee, áei (/ā(y)əy/) 'where I dwell'. As the examples show (h) or (ih) is sometimes written for word-final /y/, presumably indicating devoicing. Another example is in §10.

37. In word-final position Mass /-aw/, /-āw/, and /-ąw/ are all perhaps most commonly spelled (-au). Where alternate spellings or etymological evidence are not available, the correct phonemicization of (-au) can sometimes be determined from forms with further suffixation. The usual treatment in this environment is for /-aw/ to remain /-aw-/, spelled (au); for /-āw/ to become /-ā-/, spelled (a) (§11); and for /-ąw/ to become /-ą-/, spelled (o), or less commonly (ó) or (ô). Other spellings are (ou) for /aw/ and /-ąw/, (eau) for /-āw/, the fully explicit (ôu) for /-ąw/--especially common in Mayhew--, and minor variants of these. Examples: aninnumau 'give it to him (you sg.)', with /-əmaw/ (cf. anumauog 'which I have given them' [Num. 27:12]); nushau (/nəhšāw/) 'he kills (him)' (cf. nushaog 'they kill (him)'; < PA *ne$^{?}$le·wa); nushau (/nəhšąw/) 'he is killed' (cf. nushoog 'they are killed'; < PA *ne$^{?}$la·wa); hennau, hennou 'he is called' (with /-ąw/; reduplication [marked by /h/, with preceding vowel dropped] of PA *eθa·wa); ohteau (/ahtāw/) 'it is (there)' (< PA *a$^{?}$te·wi; pl. ohtaash); wutôu 'he brought (it) from (there)' (presumably /wətąw/, as if from PEA **wəntāw; Mun nó·ntən 'I got it from there' points to a Class 3 TI PA *went- rather than a Class 2 TI *wentaw-); tashunôu 'he is lifted up' (MV in Mayhew 1709, John 3:14).

In some cases /w/ appears not to drop between a long vowel and another vowel (§11): au (/āw/) 'he went' (< PA **e·wa; cf. Mun é·w, but F ihe·wa), aui 'he is gone' (with absentative /-ay/), auog 'they went'. It is possible, however, that in these cases (au) represents simply /ā/ or /ą/, as it does elsewhere: naush 'see it' (§32); aúon 'if I go' (T 18), which must be /ąąn/ < PEA *āyānē. Conversely, some cases of expected prevocalic /aw/ lack the /w/; this appears to be the regular treatment of TA stems in /-aw/ before the theme sign of theme 3 (PEA *ī < PA *i): n8tiegk 'hear ye me' (< PA *no·ntawikwe); noh asukiit 'he that comes after me', noh ohsuhkiit (MV in Mayhew 1709, John 1:15), < PEA *ēhsəxkawīt; n8tah 'hear thou me' and

ken8tah 'thou hearest me' (both from earlier *-aih or the like [for the /h/ see §27], showing vowel loss before /h/; cf. §30); but asuhkaue 'after' (particle and preverb), with no loss of *w in the same apparent sequence. The orthography of these TA theme 3 forms suggests that the stem-final *aw has somehow been reshaped to Mass /-ay/.

The usual spellings of Mass /əw/ are (8), (8w), (u), and (uw) prevocalically, and (8), (u), and (ou) word-finally; after (y) the sequence (eu) appears instead of (u), and (eu) is also attested after (sh). Mass /əw/ generally reflects PEA *əw, which continues PA *ew and some cases of PA *iw and *ow (morphological analogy having apparently disturbed the original pattern of the reflexes; see §§42, 43). Examples: k8sh8, k8sheu (both /kōhšəw/) 'your (pl.) father', k8sh8oog, k8sh8woog (both /kōhšəwąak/) 'your fathers' (T 113; Jer. 44:9, 21) < PEA *kōhxəwa, *-əwāwak, reshaped continuation of PA *ko·hθwa·wa(ki); wuttahhou (/wətāhəw/) 'their heart', wuttahh8oash (/wətāhəwąaš/) 'their hearts' (Jer. 49:22, Num. 32:7); keekou (/kīkəw/) 'your (pl.) house' (< PA *ki·kewa·wi; cf. F owi·kewa·wi 'their house'), loc. keekuwout (El. Gr. 11); mekonittuog 'they fight each other' (with reciprocal suffix, inflected for third person plural, /-ətəwak/ < PEA *-ətəwak < PA *-etwiwaki); appu (/apəw/) 'he sits' (§28); wadchu (/wačəw/) 'mountain' (§3); ayeu (/ayəw/) 'he is (there)' (§36); nniyeuash (/ənāyəwaš/) 'they (inan.) are so' (§14).

38. Determining the treatment of PA *i in Massachusett involves more philological problems than is the case for any other area of the phonology. There are clear examples of PA *i giving /ī/, falling together with PA *i·, and clear examples of a reflex /ə/, identical to that of PA *e. It is also evident that the original distribution of these two reflexes has been disturbed by morphological analogy, to the extent that it is difficult to specify the original distribution. The situation would be problematical even if the record were phonetically precise, but it is made more so by the ambiguities of Massachusett orthography, in which /ī/ and /ə/ can both be written with (e) or (i), and, less frequently, in other identical ways.

PA *i > Mass /ī/ (spelled as in §31) in the second syllable of a word after a short-vowel syllable in many examples: woskeche 'on top' < PA *waθkiči; nusseetash 'my feet' (Ps. 18:33) < PA *nesitali; moskeht, maskeht, pl. moskehtuash, 'grass' < PA *maškixkyiwi; tohkekom 'spring of water' < PA *tahkikamyiwi; wunnetu 'he is good', wunnegen 'it is good', < PA **welikiwa, **welikenwi; wusseenumau 'he made affinity with (him)' (1 Kings 3:1) < PA *wešiθeme·wa 'he has (him) as father-in-law'. In the corresponding words in Narragansett the reflexes of PA *i also have spellings that point to phonetic [i·], and in a significant number of cases this vowel bears the accent in Williams' transcription, most likely indicating stress: waskéche 'on the top'; wussète, pl. -tash 'foot, feet'; takêkum 'a spring'; wunnêtu 'he is

fine, good, "proper and personall"'; wunnégin, wunêgin 'welcome; it is well, good'; wussénetam 'he goes a wooing', nosénemuck 'he is my son-in-law' (Williams 1936:39; 52; 94; 6, 51, 53; 17, 36; 146). An exception to this pattern is Narr máskit 'medicine' ("a Plaister, some physicke," Williams 1936:199), but there is independent evidence for a long vowel in this word: micúckaskeete 'meadow', with the derived final /-askīht^{y}/ 'grass'.

In another set of words PA *i > Mass /ī/ in the third syllable, following two short-vowel syllables: wuskannem 'seed', pl. wuskannemuneash, < PA *weθkanimini; muhpittenash 'arms' < PA mexpetwinali; kenuppétu (/kənəpītᵞəw/) 'he grows fast' < /kənəp-/ 'fast' + PA *-iki-wa 'grows'. Again there is good correlation with Narragansett: scannémeneash 'seed corn'; wuppíttene, pl. -énash 'arm, arms' (Williams 1936:98; 51).

In contrast, PA *i > Mass /ə/, usually written (u) or (i), in a syllable that follows a long-vowel syllable, either immediately or with an intervening syllable that contains a /ə/ (< PA *e or *i): kesittu (/kīsətᵞəw/) 'he is full grown', pajeh kesukit (/kīsəkət/) 'till he is (full) grown', kesukun (/kīsəkən/) 'it is full grown' < PA *ki·šikiwa, *ki·šikenwi (cf. the forms above with the same final pair); nukkónuminneash 'old corn' (T 184) < PEA *nəkān- 'old' (cf. Illinois nacan- /naka·n-/) + PA *-iminali (cf. 'seed', above); nonkkĕsittont '(one who is) light-heeled, light-footed' (C 25, written as two words), with medial -sitt- (/-sət-/) < PA *-sit- 'foot' (cf. the corresponding noun, above); wompumus 'chestnut tree' < PEA *wāpīmīnšəy (> Mun wa·pi·mí·nšəy); mepit, meepit 'a tooth' < PA *mi·piči (with the mutation leveled). Mass /ə/ from PA *i is subject to the same syncope as /ə/ from PA *e (§29); kepshau 'he falls' < PA *ki·piʔle·wa. No clear patterns are yet statable for the treatment of PA *i in other syllabic environments in Massachusett, owing to the disruptive effects of analogy and the paucity of unambiguous examples.

A number of words are exceptions to the generalizations made here about the conditions under which PA *i gives Mass /ī/. The words with Mass /əw/ from PA *iw agree with their cognates in the other Eastern languages in pointing to PEA *əw as the usual treatment of PA *iw (§§42, 43): wadchu 'mountain', Un ɔhčú < PEA *wačəw < PA *wačiwi (> M wace·w, O wačiw). Some words with short-vowel initial syllables show Mass /ə/ from PA *i in the second syllable: penushau (/pənəhšāw/) 'he falls' < PA *peniʔle·wa (§29); tahtippadtau (/tahtᵞəpatąw/) 'he cools (it)' < PA **tahk-i-pata·-wa (cf. 'spring of water', above, with the same root);[9] togkuppinau 'he ties (him) fast' ← PA *takwipiθe·wa (Mass /-pən/ is the continuation of PA *-piθ TA 'tie' and the corresponding TI, reshaped as if with PA *-en 'by hand'; for the loss of the *w from the Mass root in this form, see §13, end). One word has been found with

/ə/ from PA *i after a sequence of two word-initial short-vowel syllables: mussittipuk, missittupuk 'neck' (T 23, 72) < PEA **mə-səkīp-īkan (cf. EAb -səkip-, medial; §§39, 40). It is, of course, easy to imagine that these apparently exceptional cases of Mass /ə/ from PA *i are to due analogy from derivationally related forms. The patterns of analogical reshaping within Massachusett stems have not yet been worked out, but some preliminary remarks are in §42.

In order to refer to the developments of PA *i with concision in the following sections, it will be said to be either retained (as Mass /ī/) or weakened (to Mass /ə/). After an outline of the facts regarding palatalization in Massachusett, processes in which weakened PA *i plays an important role, the question of the Massachusett treatment of PA *i and *i· will be reviewed and the question of whether or not these PA segments have contrasting reflexes will be examined.

39. PA *k is palatalized to Mass /t^{y}/ before PEA *ē (< PA *e· and *ye·). The sequence Mass /t^{y}ā/ is almost always written (tea), (ttea), or (dtea), and /ht^{y}ā/ is usually (htea) or (tea); word-final /-t^{y}/ (resulting from the loss of word-final PEA *ē) seems always to be written simply (-t) by Eliot, but /-ət^{y}/ seems to be consistently (-it), never (-ut). Examples: teag '(some)thing' < PA *ke·kw-; keteau 'he recovered' < PA *ki·ke·wa; petutteau 'he enters' < PA *pi·ntwike·wa; qushkodteau 'he goes across (a river)' < PEA *kwəθkakēw (> Mun kwáxkăke·w); unnóhteash 'cast it down' < PA *eθa·hke·lwe; mekonteau 'he contends, makes war' < PA *mi·ka·xkye·wa; n8wadchanit 'I am kept', with ending -it < PEA *-əkē (Goddard 1980:154).

In a number of morphological categories this palatalization is leveled out, thus eliminating some synchronic alternations between Mass /k/ and /t^{y}/: (1) before an /ā/ that results from initial change (the ablaut of short vowel to PEA *ē in initial syllables); (2) before the II final /-ā-/ ~ /-āyə-/, written -a- ~ -i(yeu-), that continues PA *-ya· ~ *-ye· (§14); (3) in reduplication; (4) before /ā/ from PEA *ē that represents the contraction of PEA *-ay-ə- in the inflection of noun stems. Examples: (1 and 2) góhpogok 'that which is thick'); (1) kobhog 'he who stops it' ← PA *ke·pahanka (§30); (2) forms of 'be strong' in §14 and 'be clean' in §36; (3) kogkopsau 'he is deaf' ← PA *kakye·pehše·wa (with root the reduplication of PA *kep- 'closed'); (3) kogkanin 'hold him back' ← PA **kakye·θeni (reduplication of PA **keθen-, §§10, 29); (4) wuhhogkat 'him (loc.)', kuhhogkáout 'you (pl., loc.)', forms of PEA *makakay 'body, self' (§28). There are some examples suggesting that AI verb stems ending in PEA *-kā, which regularly have umlaut to *-kē before third person *-w, have leveled out the expected palatalization: ket8kau 'he speaks' (final /-ōhkᾳ/ suggested by Narr kekuttokâunta 'let us speak together' [Williams 1936:57], though other languages point to PA *-o·hke·); aunchem8kaog 'they told the tidings' (the orthography points to /-ōhkāak/, with the same final as the

preceding).[10] There are a few examples of the lack of expected palatalization that are unexplained: weekikash 'build thee an house', beside 3 sg. wekitteau (T 185; PA **wi·k-ehke·-). In contrast to the leveling in many categories, a synchronic alternation between /k/ and /tʸ/ is still present in AI stems in /-tʸā/ (< PEA *-kē), which regularly have the shape /-ką/ before the n-endings (Goddard 1974:319, §1.3), continuing the PA umlaut of *e· to *a· before the n-endings that is also reflected in the Menomini TI and the Cree AI (Goddard 1974:326): qushkogkonat 'to go across' (Num. 32:7; indefinite-subject t-subordinative [§17]); unnohkon, unnuhkon 'it is thrown down' (T 172; indefinite-subject objective of transitivized AI)--compare the forms from these stems in the preceding paragraph. There is no umlaut, and hence no alternation to /k/, in what Eliot calls the optative, at least in the TA passive: n8waadchanittean-toh 'I wish I be kept' (El. Gr. 61).

PA *k is also palatalized to Mass /tʸ/ before a weakened PA *i that is followed by /m/, /p/, /hp/, /k/, or /hk/. The sequence /tʸə/ is usually written (ti) or (tti), but (tu), (teu), (tei), and (tea) are also found. In the AI singular word-final PA *-ki is continued by Mass /-tʸ/, written (-t), whether by sound law or analogy.[11] Examples: sontim 'chief' < PA *sa·kima·wa; meneehtipwish 'eat heartily' (C 49) < PEA *mərəHk- 'strong' [§14] + PA *-iƥwi 'eat'; kummenuhtikkompauwehtunkquneau 'it stands against you (pl.)' (Jer. 44:29) < PEA *mərəHk- + PA *-ika·pawi 'stand' + *-ʔtaw TA; mos kunnompe netimw8 'you (pl.) must be born again' (MV in Mayhew 1709, John 3:7; cf. nekit 'he who is born' < PA *ni·ki- AI); nummisseet 'I increase', nummissetŭmun 'we increase' (cf. missekinneat 'to increase'; C 57), < PA **meʔšiki- AI; mussittupuk, (C 6) missitteɪppeg, 'neck' (§39); ohteuk, ohteak 'field', pl. ohteuhkónash (probably (ahtʸəhk(ą̱n-)/ < PA **axkihka·ni, despite the indication of a short vowel in ahteukkŏnash [C 10]; cf. Siebert 1975:347); ohteuhkonat 'to plant' beside ohketeaog 'they plant', but (analogical or old?) ohkeehkōnat (C 76), < PA **axkihke·wa (> Mun ahki·he·w 'he plants'); kehtimau, kehteimau (C 87) (/kəhtʸəmāw/) 'he appoints (him)' < PA *kexkime·wa (cf. kuhquttum 'he appoints (it)' < PA *kexkwetamwa). The last examples show the weakening of PA *i in second syllables; it is not clear what should be made of the fact that in the forms and derivatives of PA **axkihke·- 'plant' the weakening does not occur if the second *k is palatalized.

The palatalization of PA *k to Mass /tʸ/ is also found before PEA *əw, which is usually from PA *iw (or *yiw). Word-initial *k does not undergo this change, and there are many apparently less systematic exceptions. The sequence /tʸəw/ is most commonly written (tu), to be interpreted basically as in English tune (/tyūn/), and rarely (teu); spellings with (tt) are also found, but (dt) is rare. Word-finally, where PEA *-əw has been lost, the /-tʸ/ that occurs is written as in the cases above. The spelling (tu) is ambiguous in Eliot's orthography, being the most common writing of both /tʸəw/ and /təw/ (§37). Examples: pittu

(/pətʸəw/) 'pitch, wax', also apparently pitteu (T 126; Siebert 1975:346), < PEA *pəkəw < PA *pekiwa (> Un pkú, EAb pàko, pl. pàkəwak); wetu 'house' < PA *wi·kiwa·Hmi (§28); moskeht, pl. moskehtuash, 'grass' < PA *maškixkyiwi (§38); wunnetu 'he is good' < PA **welikiwa (§38); kesittu 'he is full grown' < PA *ki·šikiwa (§38).

Retention of /kəw/ is found in a number of cases, always across a morpheme boundary. The existence of doublets appears to prove that at least some of these instances result from the analogical restoration of /k/ in an inherited, phonologically regular sequence /tʸəw/: wutohtuout, wutohtuóut 'their land (loc.)', but presumably analogical wutohk8 'their land' (which may have arisen to avoid homonymy with wutohtu 'he dwells (in that place)'; T 209; Jer. 51:4, 5), all possessed forms and derivatives of ohke 'land'; additional examples are in the last two paragraphs of §40. Other cases could be explained on the PA level as reflecting PA *kew, *kow, or *kwiw, rather than *k(y)iw, but here too analogy is possible and the otherwise generally unambiguous evidence that these sequences all fell together to PEA *kəw makes it the preferable solution: ówonogkuog, 8wonogk8og 'they have holes' (verb of possession from wónogq 'hole'); wunogk8 'he is fat' < PA *welakowa (cf. wunnogque 'fat', prenoun; wáonogqutcheg 'they who are fat', reduplicated participle); k8wadchanuk8 'he keeps you (pl.)', kuppaumukou 'he pays you' (El. Gr. 28), with /kə--əkəw/ 'he--you (pl.)' ← PEA *kə--əkəwa (> Un |kə--əkəwa|, as in Un kəmi·lkúwa 'he gave to you', kəwi·č·əmák·əwa 'he helped you' [Goddard 1974:321]) ← PA *ke--ekowa·wa (cf. k8wadchanuk 'he keeps you (sg.)'); nishk8waunat 'to bellow, to make a noise' (C 39) < /nīsk-/ 'unclean' (?) + PA *-owe· AI 'make vocal noise'.

The PA clusters that would give Mass /sk/ are palatalized to Mass /hč/ in the same environments in which *k is otherwise palatalized to /tʸ/; the /hč/ resulting from palatalization is written in the same ways as /hč/ from PA clusters with *č (§22): ukkechequanuh 'he took him by the throat', nukkehchĭkquan 'I embrace him' (C 49, explained as lit. 'I hold [him] by the throat') < PA *ki·škikwe·n- TA 'wring the neck of'; pahchau 'he turns aside' < PA *paθke·wa; mahchagq 'swamp' (MV) < *maškye·kwi (§13); nesnechag, neesnéechag '20', nishwinchag '30', etc., with /-(ə)nəhčāk/ ~ /-ən(ə)hčāk/ < PA *-i-neθk-e··k- (*-neθk- 'hand' standing for 'a pair of hands'); ogquehchippanukquog '(they, inan.) wet them', kutogqutchippanikquog 'they wet you (sg.)' < /akwəsk-/ + PA **-i-paθ- TA (root: ogquski 'it is wet'; final: see next paragraph).

Palatalization is also found before Mass /əp/ in forms containing PA *-epye·- 'water' and its derivatives: kehchippom, keechepam 'on the shore' (T 30, 135) < PEA *kīθk- 'near to, beside' (§31; PA *kyi·θk-) + PA *-epye··m-; wosketupam 'upon the waters' < PA *waθkit- (§38) + *-epye··m-; nehchippog 'dew' < /nīsk-/ 'unclean; misty' (?; T 85) + PA *-epye·kw-; nehtippaash 'they (inan.) are covered with water' < PA *lexk- 'obscured, concealed, covered' + *-epye·- II. Two examples already given as having

palatalization before PA *i could be added to this list: tahtippadtau 'he cools (it)' < PA *tahk- 'cold' + *-ep(y)at- TI-2 (cf. §38); ogquehchippan- 'to wet (him)' < /akwəsk-/ + PA *-ep(y)aθ- TA (> Un |-əpal-|, M -ɛpyaN-; cf. preceding paragraph). In the absence of examples of this pattern of palatalization before other morphemes it is not possible to do more than register the existence of these forms.[12]

40. The occurrence, distribution, and phonetic realization of Massachusett palatalization have been variously described in the literature. In Goddard (1965:211, fn. 24) it was stated that PA *k gave Mass and Narr "t" (and sometimes Narr "ch") before *y, *i, and *e·, "when medial and in some cases when final"; this is obviously an imperfect formulation. A recent description formulates the palatalization as a shift of PA and PEA *k to phonetic [kʸ] ("variously spelled") before PEA *ī and *ē (Goddard 1978:75), the assumption being that [kʸi·] was heard by English speakers as "kee", but [kʸa·] was heard as "tea" and [kʸə] as "ti" or the like; this somewhat desperate attempt to explain the apparent non-occurrence of palatalization before PA *i· and retained *i overlooked a number of details. Aubin (1980:57) gives the palatalization of PA *k to Mass [t] ("or ty?") as occurring before PA *y, *i, and *e·; he notes that the non-palatalization of *k in 'grass' is an exception, but fails to connect this with his observation that a stressed reflex of PA *i (in a syllable following a word-initial short-vowel syllable) is spelled exactly like the reflexes of PA *i· (Aubin 1980:56).[13] Pentland (1979:225-8) presents the very similar palatalization of Narragansett as a change of PA *k to /t/, /tʸ/, or /c/ (i.e. [č]) in the palatalizing environments, which do not seem to be clearly formulated but appear to be taken as PA *i and *e· (presumably after the loss of post-consonantal *y in "late Proto-Algonquian" [Pentland 1979:240]).[14] Pentland speculates that "one Narragansett dialect (presumably Narragansett proper) had unchanged k in the palatalizing environment," but he does not otherwise discuss the exceptions to his implied formulation (many of which are also found in Massachusett). Siebert (1975:442-3; also 346-7) describes "so-called palatalization" as the fronting of PA and PEA *k to /t/ before (PA) *i, *e·, and *y in the "eastern S[outhern] N[ew] E[ngland] dialects" and the shift of *k to /č/ in the same environments in the "western SNE languages"; he recognizes the existence of "some irregularities" but does not attempt to account for them. For Siebert the line between the eastern and western SNE languages divides Cowesit (Northern Narragansett) and the other n-dialects to the east from Southern Narragansett and the other y-dialects to the west.

In contrast to these earlier views, the evidence surveyed in §39 can be summarized as follows: PEA *k was palatalized to Mass /tʸ/ before PEA *ē and *əw, and before a weakened PA *i followed by /m/, /(h)p/, or /(h)k/; morphological analogy has perturbed the original distribution, and pre-Mass *stʸ has become /hč/. It will be argued in §42 that the environment "before a weakened PA *i" should be given as

"before a weakened PEA *ī," but since all of the instances of weakened PEA *ī that cause palatalization are in fact from PA *i both formulations result in the same outputs; the problem is the specification of the conditions for weakening not the specification of the length of the vowel in PA. In this section, however, in order to avoid embroilment in this other issue, the environment will be given in terms of PA *i.

None of the earlier views give PEA *əw (or the equivalent) as a separate environment for palatalization. It is possible that this environment could be collapsed with weakening PA *i, but the dialectological evidence is strongly against this. In all the Eastern Algonquian languages (with general agreement on the exceptions) PA *(y)iw and *ow fall together to /əw/ or what is obviously a direct reflex of *əw, but only in the Southern New England languages does the weakening of PA *i (as described in §38) take place. The problem of palatalization before PEA *əw is taken up in §43.

Some formulations give PA *y as an environment for palatalization. This is clearly incorrect, since in all cases the *y that appears to cause palatalization is followed by PA *i or *e· and the dialectological evidence indicates that post-consonantal PA *y was long gone by the time palatalization occurred (regardless of how the details of this change are perceived). All the earlier formulations are deficient in not stating the severely limited conditions under which PA *i causes palatalization, though some at least point out that there are some cases in which it does not do so. None reflect any awareness of the exceptions caused by morphological analogy.

In some of the earlier formulations the palatalization of *k is given as [t] or [k^{y}], but the examples cited in §39 should make it clear that all recordings are consistent with the result of the palatalization being everywhere [t^{y}] in Massachusett (setting aside the special case of /hč/ for /sk/). The reflex of PA *ke· is consistently spelled (tea), with the usual variations for (t); this contrasts sharply with the reflex of PA *te·, which is rendered (ta) or with the expected variants of (t) and (a) in the values in question. For example, in all cases noted word-initial (tea-) spells the reflex of PA *ke·- (T 160), but the reflexes of the root *te·p- 'enough' are written (tap-), (tâp-), and (taup-), never with an (e) (T 158). The occasional use of the spelling (-tea-) for the reflex of PA *-te·- in non-initial syllables cannot serve as a basis for claiming that all instances of orthographic (tea) represent [ta(·)]; the spelling (-tea-) for /-tā-/ seems to be most common in the sequence (-teau) for /-tāw/, where it serves to avoid the triple ambiguity of word-final (-au). For example, Eliot regularly writes ohteau 'it is there' (< PA *aʔte·wi) distinct from ohtau 'he has (it)' (< PA *aʔta·wa); as related forms show, these must be /ahtāw/ and /ahtąw/, respectively, corresponding exactly to the PA etyma (§37). Another source of orthographic (-tea-) is discussed in §41.

When /t^{y}/ is written word-finally or before (i) there is no direct indication that a palatalized segment rather than a plain /t/ is involved (but see note 11). Some indirect evidence for word-final /t^{y}/ has been mentioned (§39), and support for this from Narragansett is considered below. The sequence here taken as /t^{y}əm/ is usually written (tim), and /t^{y}əp/ is generally (tip). That these spellings do not indicate /təm/ and /təp/ is shown by the contrast between them and the spellings (tum) and (tup) which indicate undoubted /təm/ and /təp/ with /t/ from *t: kuttumunge 'poor' (prenoun) < PA *ketema·ki; wuttup 'his brain' (§20). The spellings (tum) and (tim) contrast sharply, with little overlap except the occasional writing of (tum) or (tŭm) for /t^{y}əm/ by Cotton; (tup) and (tip) are more ambiguous, but morphemes with *t tend to have the former and those with *k to have the latter. Furthermore Cotton's occasional writing of (teim) and (teip)--to be interpreted in gross English terms as [tĭĭm] and [tĭĭp]--for normal (tim) and (tip) can only be taken as the extension of the use of (te) as a digraph for /t^{y}/ from position before (a) to position before (i) as well: missitteĭppeg 'neck' (C 6; §39); kehteimau 'he appoints (him)' or 'he is appointed' (C 87; §39). The possible interpretation of (tim) and (tip) as /tim/ and /tip/, with a phoneme /i/ distinct from /ī/, would have to be evaluated in terms of what other evidence there might be for the existence of such a phoneme, but since it is clear that weakened PA *i gives /ə/ in some cases the presumption must be that it gives /ə/ in all cases that are orthographically consistent with the value /ə/. This line of argument may be summed up as follows: The orthography indicates that definitely in some cases and possibly in all cases palatalized *k becomes /t^{y}/ and weakened *i becomes /ə/; hence, the presumption must be that a spelling (ti) for the reflex of a sequence of these two original segments represents /t^{y}ə/, and that word-final (-t) for the palatalization of *k represents /-t^{y}/. The burden would lie on those who propose a more complex set of reflexes to present evidence in its favor.

The hypothesis that *k was palatalized to [k^{y}] before all instances of PA *i· and *i, but that this segment was written (k) before phonetic [ī], is most directly refuted by the fact that Mass /sk/ becomes /hč/ when palatalized but remains as /sk/ before retained /ī/ (examples in §38). It is therefore very likely that, as the orthography implies, all instances of /k/ before /ī/, whether or not preceded by /s/, lack the phonetic attributes of palatalization that are present when the reflex of *k is spelled with (t).

Although it is overwhelmingly the case that the palatalized reflex of *k in Massachusett is written with (te) or (t), there are a few cases in Eliot and Cotton that have the writing (ch): chágwas, chauguas 'what', beside teaguas '(some)thing', < PA *ke·kw-; God quehtehchaj 'God forbid', beside nukqueehtĭtteam 'I forbid' (C 48), < PA *kwe?texkye·-AI (from *kwe?teθ- 'cause to fear'); wechim8quat, wetimunkqu[a]t 'a sweet smell' (C 14) < PA *wi·nkimya·kwatwi (cf. Aubin 1980:58).

The earliest known recording of a word with palatalization is in a document originally written in the first two decades of the seventeenth century that has been edited by Barbour (1980), who conjectures a date for it of 1608-1610. After a listing of the rivers and "Sagamores" of Maine the islands "west" of Cape Cod are treated, and one of the chief men of Martha's Vineyard is referred to as "the Sogum (for here they are not called Sagamores as before)" (punctuation emended). The word "Sogum," to be read with a "soft g" (English /ž/), is Eliot's sontim (/sąt^{y}əm/), the source of the English word sachem.

Native documents from Martha's Vineyard show occasional instances of orthographic (ch) representing the palatalized reflex of *k, but at present these can only be reported anecdotally: witch nippekohchu 'from the water', na wehque nippehchu 'as far as the water'; these have the locative ending /-(hką)ht^{y}əw/ found in Eliot with a (t): nippekontu 'water (loc.)' (T 94, 137), wonogquehtu 'in holes' (T 196), with /-ht^{y}əw/ < PEA *-xkəw (cf. the plural locative ending in WAb ąwətíihkok 'in the roads', with further suffixation by the locative -ək < PA *-enki [I. Goddard, field notes, 1971]). There is at least one case in which both writings of /t^{y}/ are found in the same word: uppemmechuonkkanehtu 'to his descendants' (cf. Eliot's pometuonk 'generation' i.e. 'offspring'). A few instances of (te) written for /č/ raise the possibility that /t^{y}/ and /č/ had fallen together, at least for some speakers, in the eighteenth century: nunneteanog 'my children' (cf. Eliot's keneechanog 'your (sg.) children' < PA *ni·čya·n-); mahteaquit 'swamp (loc.)', beside mahchagq 'swamp' (§13). Obviously a systematic study of the native materials will be necessary before the significance of these spellings can be understood.

Pentland (1979:227) conjectures that in Narragansett the "rare c [i.e. /č/] reflex [of *k] is probably a borrowing... since it occurs only in 'Sâchim', the usual jargon term for 'chief'...and in one other word," sôchepo 'it snows' < PA *so·kixpowi. There are many other examples, however: sítchipuck 'neck' (Mass mussittipuk, §38); nóonatch 'deer' (cf. EAb nòlke); cutchashematítin 'How many brothers have you?' (root /t^{y}āhš- < PA *ke·hθ- 'how many, so many'); macháug, machàge, machagè, machaùg 'no, not, nothing', beside mateàg (cf. Mass matteag < ma(t) + *ke·kw-); wepè cummécautch 'you are a quarreler' (i.e. 'you only fight' < PA *mi·ka·xkye·- AI; Mass mekonteau, §39); nippóskenitch 'I am robbed of my coat' (first singular indefinite-subject form with /nə--ət^{y}/ < PEA *nə--əkē); wunnêgitch 'when it is good', wuttúnnemitch 'when it is harvested', and aukeeteaûmitch 'when people plant' ("planting time"), with /-t^{y}/, /-əmət^{y}/, and /-mət^{y}/, the subjunctive endings of the II and indefinite-subject TI-lb and AI (< PEA *-kē, PEA *-əmənkē, and Common Northern Eastern Algonquian *-məkē ← PEA *-nkē [analogically reshaped on the model of the TI in the languages that have /k/ from PEA *nk]). The sources of these forms are as follows (given in order, with the pages where additional examples can be found in brackets):

Williams (1936:50; 104 [175]; 29 [8 misprinted, 148, 172]; 36, 37, 42 (2), 13; 183; 119 [183 (2)]; 87, 100, 98 [63, 66, 73, 83 (2), 84 (2), 86, 87 (2), 188, 196 (2)]). The writing of (tch) in word-final position appears to support the evidence from the writing of preceding vowels in Massachusett that the word-final palatalized reflex of *k remained distinct from /t/. It is, of course, difficult to determine whether or not Williams' writing of (ch), (tch), and (dg) for the palatalized reflex of *k accurately records a variety of southeastern New England speech in which the /tʸ/ of other varieties fell together with /č/. In the absence of evidence that these spellings correlate with other distinctive dialect features, however, it is most reasonable to assume simply that Williams either learned some morphemes with /tʸ/ as having /č/ or wrote /tʸ/ as (ch), etc., when English orthographic conventions provided no better alternative.

The words cited by Pentland (1979:226-7) as having Narr /t/ as the palatalized reflex of *k are all spelled with (te), (ti), or (tu) and are thus consistent with the interpretation of this segment as /tʸ/, with a single exception. Beside peteaúgon 'rib' and nuppeteâgon 'my bone' (i.e. 'my rib') there is also the spelling peetaũgon (Williams 1936:134); cf. Mass muhpeteog, muhpeteag 'rib' < PA *mexpike·kani. In view of the variant spellings and the total lack of any other forms that would require that the palatalized reflex of *k be interpreted as /t/, the most reasonable explanation of the form peetaũgon is that it is simply a misprint for *peteaũgon. Pentland's assertion in connection with these words for 'rib' that "Williams originally left a space between syllables" is unsupported by any evidence and seems highly unlikely. Two words, conjectured to be "Narragansett proper," are alleged to have unchanged /k/ in palatalizing environments (Pentland 1979:227). Of these assóko 'a fool' (i.e. 'he is a fool'), beside assótu (< PEA *aškōkəw), is conceivably from a dialect further west that, like Mohegan-Pequot, restored unpalatalized /k/ before /əw/ in the third person of verbs, but analogical forms like this are also found in the Massachusett materials: wunnekuonk 'his birth' (Indian Laws, in T 202), beside neetu 'he is born' (nekit 'he who is born') < PA *ni·kiwa. The other alleged example of unpalatalized *k is nowecóntam 'I am glad', but this is the regular reflex of PEA *wīnkātam, not a cognate of Narr noweeteántam 'I am glad' (< PEA *wīnkē̱ləntam); cf. Mass n8wekontam 'I am glad' (T 185), EAb n8igaⁿdam 'je le veux' (Râle 1833:541).

The conditions for the palatalization of *k appear to be the same in all varieties of Massachusett and Narragansett (as recorded by Williams; the "Narragansett" recorded by Ezra Stiles is most likely actually Eastern Niantic). The two disagreements in the occurrence of /tʸ/ that have been noted are almost certainly due to morphological analogy or leveling. In the first and second person singular of stems in PA *-ki (with weakening *i) Massachusett appears

to have consistently /t^{y}/: k8toht (/kōtaht^{y}/) 'you dwell (in that place)' (Gen. 45:10; cf. n8tohkin 'I dwell here' < PA **wetaxkyi- AI); nummisseet 'I increase' (C 57; cf. missekinneat 'to increase' < PA *me?šiki- AI); nunnishquet 'I rage' (C 61; cf. nishquékĭnneat 'to rage'). Narragansett, in contrast, appears to have both /k/ and /t^{y}/ in the same forms: cowénaweke (/kəwīnawīk/) 'you are a rich man' (cf. wenawwêtu 'he is rich'); nummácheke (/nəmačīk/) 'I am a poor man' (cf. machêtu 'he is (a) poor (man)'); kunnishquêko, to be emended to kunnishquêke, 'you are fierce' (cf. nishqûetu, to be emended to nishquêtu, 'he is fierce'); but cummúmmuckquete (/kəməməkwītʸ/) 'you are swift' (cf. muckquétu 'he is swift', with the root /(mə)məkw-/ also found in Mass (mum)mugquomp 'captain (i.e. war chief)' and mukquoshim ~ mummugquoshum 'wolf') (Williams 1936:164, 36; 169, 36, 168; 143, 182; 77). Since palatalization before weakened *i depends on the nature of the following consonant, word-final position would appear to be an unlikely environment for it; hence, the Narragansett forms with /-k/ are likely to be lautgesetzlich and those with /-t^{y}/ in the two dialects would then be by analogy to the stem-final /-t^{y}ə/ that otherwise occurs throughout the independent indicative paradigm. Quite possibly Williams was recalling forms from two different dialects. Coincidentally, the word for 'be poor' furnishes the only Massachusett example identified so far of the restoration of unpalatalized /k/ throughout a paradigm that by sound law (as shown by Narragansett) had an alternation with /t^{y}/: matchéku 'he is poor' (T 51), matchek8 'he is poor', nummatchek 'I am poor' (C 69). The other point of disagreement between Massachusett and Narragansett on the occurrence of /t^{y}/ is in the subjunctive endings. Here Narragansett preserves /-t^{y}/ from PEA *-kē distinct from the /-k/ (< PEA *-k) of the changed conjunct and participle, but Massachusett has restored /-k/ throughout the conjunct: Narr wunnêgitch 'when it is good' (and more examples, above), máúseck 'a great one', tou autèg 'where does it lie?' (Williams 1936: 87, 101, 39); Mass sokanonk, sokenunk 'when it rains', mohsag 'a great thing'. An isolated example of leveling to /-t^{y}ə/ where a form of the stem with /-kə/ would be expected is found in one of Cotton's dialogues: koonetŭnat 'you to be good' (C 101).

41. In addition to the palatalization of *k Massachusett has a fundamentally distinct process of progressive palatalization that, to avoid confusion, may be called infection. By this process, when a weakened *i is followed by /n/, /t/, /h/, or /ht/ the vowel in the next syllable is affected in a way that is usually indicated orthographically by an (e) inserted after the intervening consonant. The phonetic nature of infection is uncertain, but for convenience it will be indicated in phonemic transcriptions as a raised i (/^{i}/). The /t^{i}/ resulting from infection differs from the /t^{y}/ of palatalization in a number of ways. No examples have been found in any of the Massachusett or Narragansett sources of /t^{i}/ being written with (ch), and the (e) indicating infection appears to be optional, at

least in some contexts, unlike the (e) that indicates palatalization. Examples: sekeneam, sekenam 'he hates (it)' < PA **ši·nkinamwa; kuhkinneam 'he observes (it)', kóhkinnumohettit 'that which they observed', < PA *kexkinamwa (> M kɛhke·nam 'he knows it'); wuskannemuneash, skannémunash 'seeds' < PA *weθkaniminali; meepiteash, meepitash 'teeth' < PA *mi·pitali; nukkezheomp (/nəkīshiąp/) 'I have created (him)' < PA *ne-ki·ših-a··pan-; noh kesteunk 'he who creates it' < PA *ki·šihta·kwa.

The common transitive final pair *-h TA, *-ht TI-2, generalizes the forms with infection from its occurrence in stems like *ki·ših(t)-: upposqusháheóuh 'they made him go naked' (causative with -he ← PA *-h TA, of posk- 'naked' + PA *-wehθe· 'walk'); nutchepsháheaog 'I cause them to be dismayed' (Jer. 49:37), causative of chepshau 'he is amazed'. The many stems that show these finals as -he and -hte (or -te) after orthographic (e) can accordingly be explained as having been reshaped analogically, regardless of whether the preceding (e) is taken as /ī/ or /ə/; alternatively, it may be that infection was caused by retained *i before *h and *ht under certain conditions, though this seems less likely from the evidence available. Examples: qutcheheuhkon 'do not tempt him', qutchehteó8k 'try (it; you pl.)' < PA *kwečihe·wa, *kwečihta·wa; nukkodneetskeheómun 'we would have healed (her)' (Jer. 51:9), neetskehteau 'he heals (it)'. Some support for the analogical explanation can be derived from the regular pattern of stems that show retained (e) before the final -he or -(h)te in a syllable following a single short-vowel syllable but syncopate the (e) when the stem is prefixed or has initial change: unneheau 'he does to (him)' (1 Kings 1:16), kuttinheon 'you (sg.) do it to him' (T 172); wanneheont 'if he loses him', n8wanheomp 'I have lost (them)', ne wánheonche 'he (obv.) whom he lost', noh wanheogkup 'he whom I had lost', wannehteunk 'if he loses it', wanteunk 'he that loses it' (T 182) < PA *wanihe·wa, *wanihta·wa 'he loses him, it' (the forms showing syncope after initial wan- or wán- have orthographically concealed initial change, i.e. /wān-/). In these stems the infection after retained (e) could easily have been analogically extended from the forms with syncope. Still another possibility is that orthographic (-ehe-) and (-ehte-) in these stems represent phonemic /-əhⁱ-/ and /-əhtⁱ-/, with weakened *i generalized in the stem and the resulting /ə/ subject to syncope (perhaps obligatory before /h/) when unstressed.[15]

When infecting stems come to stand before a morpheme beginning with /ə/ the potential sequence /ⁱə/ is reflected by orthographic (e) or (i) in most cases: ne ánhen 'what I did to you', ne anhikqueog 'what he did to us' (with theme signs PA *-eθ and *-ekw); kuttinhen 'you do it to me', ne ánhit 'what he did to me' (with theme sign PA *-i). Before /əw/ infection seems not to be written: neetskehuwaonk 'a cure'; however, (u) here may represent /ⁱəw/. The sequence /ⁱō/ is written (u), (ú), and (eu), all presumably to be interpreted as the equivalent of English /yū/: unnehhuk,

unnéhúk, unneheuk (all /ənəh^{i}ōhk(w)/ or /ənīh^{i}ōhk(w)/) 'do (thus) to them' (T 172).

42. Now that the basic facts regarding the treatment of PA *i and *i· in Massachusett have been considered (§§31, 38-41), the controversial question of whether these segments have distinct reflexes can be examined. Elsewhere the view has been presented that PA *i and *i· fell together to PEA *ī and thus do not have contrasting reflexes in any Eastern Algonquian language (Goddard 1971:139, 1980:149-50). Opposing views have been put forth by Aubin (1972, 1978, 1980:55-6) and Pentland (1979:241-2), who claim that Narragansett and in Aubin's case also Massachusett attest unmerged reflexes of PA *i and *i·; Siebert (1975:294, 442) has argued that Powhatan keeps PA *i and *i· distinct, but that the Southern New England languages have lost this contrast.

There is no question that a prima facie case can be made for a distinction between the treatments of PA *i and *i· in Massachusett and Narragansett. Among the large number of examples that have been assembled in the literature, PA *i· is always reflected by what appears to be /ī/, and only PA *i shows weakening and causes palatalization of *k. But the question is not whether or not there are differences in the reflexes of PA *i and *i·, but whether or not the reflexes of these segments contrast; the fundamental structural principles of linguistics teach us that these are not the same thing. To show that PA *i and *i· had contrasting reflexes in Massachusett and Narragansett it would be necessary to show that their reflexes contrasted in the same phonological environment, or set of environments, but the proponents of this view have never attempted to do this. This methodological principle is directly relevant to the present issue because of the nature of the distribution of PA *i and *i·. PA *i· is found in stem-initial syllables, including in the initial syllables of dependent noun stems, and in the second syllables of stems with a short-vowel first syllable, but rarely elsewhere. A handful of medials have PA *i· (e.g. PA *-i·nkw- 'face, eye') and some intransitive verb stems end in *i·, in most cases segmentable as a final *-i· or *-yi· ~ *-ya· (Bloomfield 1962:304, 311-2, §§15.171, 214); these and some other cases of PA *i· in stems are discussed below. PA *i· seems to be the regular phonological treatment of a sequence *iye arising from the suffixation of an element beginning with *e to a noun stem in *iy, but *i· is otherwise not found in inflectional endings. PA *i, in contrast, is totally absent from stem initial syllables, but is extremely common stem-internally, stem-finally in intransitive verbs, and in inflectional and derivational endings. Given this partial complementarity of the distributions of PA *i and *i·, it is clear that any phonological processes in the descendant languages that affect vowels according to their syllable position in the word may appear to affect PA *i and *i· differently, even in languages in which these segments had previously ceased to be in distinctive opposition.

It is necessary, therefore, to examine the reflexes of PA *i and *i· in Massachusett for each type of syllable in the word. In initial syllables only PA *i· occurred, hence no contrast has ever been possible; examples showing PA *i· reflected as Massachusett and Narragansett /ī/ in initial syllables--the vast majority of those given for PA *i· in the literature--are therefore entirely irrelevant to the question of whether or not the reflex of PA *i was in contrast. In the second syllable of a word beginning with a short-vowel syllable the available certain examples of PA *i· are reflected by Mass /ī/, and the much more numerous examples of PA *i are reflected by both /ī/ and /ə/: wuskesuk (/wəskīsəkw/) 'his face, his eye' < PA *weški·nšekwi; musseet (/məsīt/) 'a foot' < PA *mesiči (with mutation leveled); penushau (/pənəhšāw/) 'he falls' < PA *peniʔle·wa (§38). Given the rarity of good etymologies with PA *i· in this position, and in the absence of an explanation for the double treatment of PA *i, the lack of examples of /ə/ from PA *i· cannot be taken to show that PA *i and *i· were treated differently. The problem is to account for the two treatments of PEA *ī (or, noncommittally, PA *i), and it may well be that the conditions under which PEA *ī gave /ə/ simply did not obtain in the few cases in which PEA *ī reflected PA *i·.

In the available examples the cases of Mass /ə/ from PEA *ī (< PA *i) in a syllable after an initial short-vowel syllable can be classified as follows:[16] (1) the /ə/ continues the juncture vowel PA *i, inserted between non-syllabics in most morpheme combinations (the connective *-i- of Bloomfield 1946:90); (2) the /ə/ is the final segment of an AI verb stem; (3) the /ə/ is in one of two kinship terms having identical diminutive formations. Mass /ī/ from PEA *ī (< PA *i) in this position is also found (1) as the reflex of connective *-i- and (2) as the final segment of an AI stem, but it is most characteristic (3) stem-internally in synchronically unanalyzable stems, including stems with an old combination of root and final that is no longer productive. Mass /ī/ from PEA *ī (< PA *i·) in this position usually appears to be morpheme-internal but also occurs at the end of AI stems. A straightforward generalization that can be made about these distributions is that the double reflex of PEA *ī is characteristic when it occurs at a morpheme boundary (a position universally susceptible to the perturbations of morphological analogy), while the single reflex /ī/ is found when the segment is not adjacent to a productive morpheme boundary (except for the two kinship terms). If this generalization holds, it is clear that the apparent differences in the treatment of PA *i and *i· in Massachusett could simply be an artifact of the differences in the original distribution of the two vowels. It is important to note, also, that the problems with this set of reflexes are not substantially relieved by the postulation of a retained distinction between *i and *i·. Such a postulation would merely have the effect of relabeling the problem of the double reflex of PEA *ī as the problem of the double reflex of PA *i.

In the second syllable of words with an initial long-vowel syllable PA *i is reflected by Mass /ə/ in all cases noted, except where paradigmatic leveling has generalized /ī/ after a syllable with initial change: sontim 'chief' < PA *sa·kima·wa; nag agkemutcheg 'they who were numbered' (Num. 26:57), i.e. /ākīməčīk/, with the /ī/ in the second syllable generalized from unchanged forms (ogkem 'count them', i.e. /akīm/ < PA *akimi; nutogkemounnonog 'we counted them' [Num. 31:49]). In the same position PA *i· also seems to be reflected as /ə/ in the handful of cases noted in which it occurs stem-internally (with one uniform set of exceptions): ompinneau 'he looses (them)', i.e. releases or unbinds them (and other forms, T 106) < PA *a·pi·ne·wa (> Sh ha·pi·n- TA, TI 'unhitch, unscrew'); pânikquâ '(he is) squint-eyed' (C 20) < PA **pa·n-i·nkwe·-wa (*pa·n- 'broad' + *-i·nkw- 'eye'); kákeneuhquayaogish 'sharp-pointed things', with /kākən^{i}-/ ← PEA *kəkīn-, the changed form of *kakīn-, the reduplication of *kīn- < PA *ki·n- 'sharp' (but the rest of the form is unclear). The exceptions to what is here taken as the regular weakening of PA *i· after a long-vowel syllable all have the shape of reduplicated stems beginning with the sequence C_1ī(h)C_1ī- (where C may be C or Cw): weewees (T 188), wewes (C 4), 'screechowl' (gloss illegible in C); sesékq 'adder, viper' (i.e. 'rattlesnake') < PA *ši·ʔši·kwe·wa; weween 'a horn' (C 4) < PA *wi·wi·θa; sesep 'duck' (C 4) < PA *ši·ʔši·pa; queques 'fish sp.' (C 9); pepenam 'he choses (it)', Narr pepênash 'take your choice' (Williams 1936:42), but also given as pepénam, pepeneam (T 123, 234) < PEA *pīpīnam (> Un pi·p·ǐ·nam); Narr quequĕcum 'duck' (Williams 1936:90). This is also the treatment in the synchronically productive reduplication of this type: pepemsque 'crooked' (beside pemsqu-); wéhwheepétu 'he is a cripple'. The failure of PA *i· to weaken in these forms can be attributed to the universal tendency for reduplicated forms to be exceptions to otherwise regular sound laws that would render the reduplication opaque; alternatively, confirmed neo-Neo-Grammarians could probably consider it the phonetically regular treatment of PEA *ī after an initial syllable of the shape *C_xī(h)C_x- (C = C or Cw). The fact that in the cases that have PA etymologies all of these retained vowels reflect PA *i· is accounted for by the fact that PA *i did not occur in initial syllables and hence did not occur in the second syllables of reduplicated forms.

The foregoing survey of the treatment of PEA *ī in the first two syllables of words makes it clear that the variations in treatment cannot be explained by postulating a retained distinction between PA *i and *i·. Not enough examples can be assembled to make a survey of the treatment of PEA *ī in the later syllables worthwhile, but the special case of the AI stems in /ə/ and /ī/ will be taken up in detail below. There remains, however, the problem of the double treatment of PEA *ī in second syllables after a short-vowel syllable. The phonological origin of this variation is still apparent when old combinations with certain common finals are examined: wunnetu (/wənītʸəw/)

'he is good' < PEA *wərĭkəw; beside kesittu (/kĭsətʸəw/) 'he is full grown' < PEA *kĭšĭkəw; matchemungquot (/mačĭmąkwat/) 'it smells bad' < PEA *mačĭmākwat, beside wetimunqu[a]t (/wĭtʸəmąkwat/) 'it smells sweet' < PEA *wĭnkĭmākwat (see §40). In forms like these it is clear that Mass /ĭ/ was the reflex of PEA *ĭ after a short-vowel syllable, and Mass /ə/ was the reflex after a long-vowel syllable. Furthermore, it can be observed that the expected phonologically conditioned automatic alternation between /ə/ and /ĭ/ has been leveled out stem-internally, e.g. in /akĭm-/ TA 'count', discussed above. It is, therefore, entirely to be expected that synchronically productive non-initial elements (medials and finals) would tend to generalize either /ə/ or /ĭ/. The postulation of a widespread pattern of morphological analogy of this type accounts for the cases of Mass /ə/ from PEA *ĭ in set (1) of those listed two paragraphs above. For example, /kəhtʸəm-/ TA 'appoint' (§39) shows the generalization of palatalizing /-əm/ as the continuation of PA *-im 'act on by speech' (matched by /-wət/ TI-1b < PA *-wet) after a root *kexk- 'known, observed, marked' that is reflected in several Massachusett stems (kuhkinneam 'he observes (it)', ukkuhkhamun 'he marks it out', ukkuhk8tomauuh 'he showed (it) to him'--T 42). The same final occurs in /wəyatʸəm-/ TA, /wəyakwət-/ TI-1b: k8weadtimuk8 'he has taken counsel (against) you' (Jer. 49:30), weogquttumwog 'they held a consultation' (Mark 15:1). The fact that the stem 'to appoint' was apparently felt to be productively formed or at any rate transparent has led to its reformation with the synchronically productive form of the final /-əm/, in spite of the fact that the existence of a reconstructible PA stem *kexkim- makes it likely that /kəhtʸəm-/ is basically an inherited form. In contrast /akĭm-/ TA 'count' (matched by /akĭt-/ TI-1a; e.g. ogketam 'he counts (them, inan.)'), although analyzable as having the structure root-plus-final, is synchronically a frozen formation, with an unproductive root and a final that is purely functional and lacks any independent semantic salience. Among the other problematical words cited in §38 with /ə/ from PEA *ĭ, penushau 'he falls' has the extremely productive AI final /-əhšą/ ~ /-əhšā/ (cf. kepshau 'he falls'); togkuppinau 'he ties (him) fast' probably shows generalization of /-əpən/ TA, TI-1b 'tie' (cf. the reduplicated form wutohtogkuppinouh 'they bound him'); missittipuk 'neck' probably has /-sətʸəp-/ from the corresponding medial, which is the function of the Eastern Abenaki cognate of this element (Aubery ms. dictionary; F.T. Siebert, Jr., personal communication) though not citable for Massachusett. Conversely, generalization of the variant of a final with /ĭ/ is seen in wéhwheepétu 'he is a cripple' (< PEA *-ĭkəw, from forms like wunnetu 'he is good') and in Narr wechêkum, wechekom 'the sea' (Williams 1936:106, 131, 133), with the final /-ĭkam/ 'water' of the inherited takêkum 'a spring' (§38).

The cases of Mass /ə/ from PEA *ĭ in set (3) of those listed three paragraphs above are the following: ummissésoh 'his sister' (i.e. 'his or her older sister') < PEA *wəmĭhs- + /-ĭs/ 'diminutive' + /-ah/ 'obviative' (cf. PA *wemihsali),

also in WAb nmessis (/nəməssis/) 'my older sister', EAb nə̀məssis (Laurent 1884:22; Siebert 1975:299) (see also §23); wussissesoh 'his uncle' (i.e. mother's brother) (Lev. 10:4, fide K.J. Bragdon) < PEA *wəšīhs- + /-īs/ + /-ah/ (cf. PA *wešihsali; *nešihsa 'my mother's brother' > EAb nesis [Râle 1833:498], Narr nissesè [to be read nissèse (/nəsīhs/)]). The agreement with Eastern and Western Abenaki on the word for 'older sister' shows that the /ə/ in these words has nothing to do with the process of the weakening of PEA *ī, which is confined to Massachusett. Siebert (ibid.) regards the EAb /ə/ as the regular reflex of PA *ye; if this analysis is accepted it can also be applied to the Massachusett words, which would then not be examples with PEA *ī at all. However, no evidence has been presented that would demonstrate that the setting up of a PA *ye distinct from *i medially and *i· in initial syllables is anything more than an ad hoc device for explaining some cases of unexpected /ə/ in Abenaki. Most of the examples proposed as having PA *ye have Abenaki /ə/ either (1) before /ss/ or /sk/ or (2) before /m/ after a long-vowel syllable. Unless it can be shown that there are old cases of unstressed Abenaki /i/ in these environments from PA *i and *i· there is no need to set up an additional PA sequence; Abenaki /ə/ can simply be stated to be the regular reflex of PEA *ī in these environments. It appears that in Abenaki /ss/ replaces /hs/ in diminutives and secondarily in some other forms; the same replacement could well have existed in Massachusett, though it would be effectively masked by the orthography and would seemingly be less widespread outside of diminutive forms. In any event, the /ə/ in the Massachusett words for 'older sister' and 'mother's brother' is to be linked to processes associated with diminutive formation in Abenaki and is not an exception to the sound law by which PEA *ī would have been retained in unmodified words of this shape.

There remains the question of the AI stems in Mass /ə/ and /ī/ and their possible relation to PA stems in *i and *i·. In general the two classes of Massachusett stem are easily distinguished in their orthographic representations. The stems in /ə/ are written with (i) or (u) in the non-negative independent and the third person and indefinite-subject forms of the conjunct. The third singular independent indicative ends in -u and the third plural in -uog; the first and second person singular have a zero ending (and drop the /ə/), except for nussim 'I say', kussim 'you (sg.) say' (the only monosyllabic stem in /ə/). Examples: appu 'he sits' (1 Kings 1:17), appuog 3pl., nutap 1sg., kutapin, kutappin 2sg. subordinative, apit 3sg. participle; neetu 'he is born', nummahche nettimun 'we are born' (C 40), nekit 3 sg. participle, nekinneát 'to be born' (indefinite-subject t-subordinative). The stems in /ī/ are usually written with (e) or (ee) where the /ə/-stems have (i) or (u). In the independent indicative the third singular ends in -eu (occasionally -u) and the third plural in -eog; the first and second singular end in -em (with the /m/ that is found in these forms after

all stems ending in a long vowel). Examples: nauwaeu 'he bows down', nauwaéog 3pl.; kouéu 'he sleeps', nukkouem 1sg., kait, kawit 3sg. participle, kaécheg 3 pl.; usseu, ussu 'he does (it)', nutussen 'I do it', ne asemuk 'what is done'. In the imperative both types seem to favor (i) in the singular (sometimes syncopated) and (e) in the plural: apsh 'sit (sg.)', apek, apegk pl.; ussish 'do that (sg.)', ussek pl. In the negative both types seem to have (e) or (ee) except in the first and second singular independent indicative, where both have -8h or the like; the corresponding plurals are uncertain. The first and second person conjunct forms of both stem types are written ambiguously with (e) in most cases, but also with (é) and (è); the different spellings do not seem to reflect a contrast between /əy/ and /ĭy/ but rather variant spellings of the expected /əy/ reflex of PEA *əy < *ĭ-y (cf. Goddard 1979: 15, MP-8a).

The two classes of Massachusett AI stems in /ə/ and /ĭ/ can be compared directly to the Delaware classes with unstable /ĭ/ and stable /I̍/, respectively: Mass appu 'he sits', matta apéi 'he is not at home' (with absentative -i /-ay/), matta na...wutappein 'he does not abide there' (Jer. 49:33), corresponding to Mun ăpə́w, máh ăpí·wi̍, máh wtapí·wən; Mass kouéu 'he sleeps', Mun kawí·w; Mun ški·w 'he urinates', Mass /ĭ/-stem shown by noh sagket 'he who urinates'; Mun má·či·w 'he goes home', Mass monchu, shown to be an /I̍/-stem by nummonchem 'I go', monchetuh 'let's go' (Gen. 33:12); another example in §11. The Delaware classes are differentiated only in the third person forms of the independent; in Massachusett the differentiation is more widespread but is still not found in all categories. Since it has been established that Massachusett has undergone analogical perturbations of the original distribution of /ə/ and /ĭ/, it is evident that starting from an earlier stage resembling Delaware the distribution of the stem variants of the two classes in Massachusett could have arisen by analogy. It would be necessary to assume that the distinction between the two classes somehow survived the weakening of PEA *ĭ; the parallelism between Massachusett and Delaware shows that any interpretation of these stems must start from this assumption. The easiest way to explain how this could have happened is to postulate that PEA *ĭ before *w was not subject to weakening in Massachusett; this would account for the maintenance of the distinction between the two classes and the otherwise unmotivatable retention of /ĭ/ before the *w of the negative (usually lost by a relatively recent rule in Massachusett; §11). Independent confirmation of the fact that retention of PEA *ĭ before *w is the regular phonological treatment in Massachusett is found in the reflex of the secondary noun final PA *-i·w (usually occurring with the third-person prefix *we(t)- in a derivational function) that is used to form tribal names and the like: wut-Egyptianseog 'the Egyptians', with /wət-...-ĭak/ < PEA *wət-...ĭwak < PA *wet-...-i·waki; Narr Massachusêuck (and several other such forms, Williams 1936: [Introduction p. iv]); M o(t)-...-e·w, O o(t)-...-i· (e.g.

Callender 1978:646), Mun wšəwé·ki·w 'Six Nations Reserve Indian' (šǎwé·ka 'Six Nations Reserve' + |wə-...-īw|), pl. wšəwe·ki·wak.

The weakening of PEA *ī would have resulted in complex patterns of alternation between /ə/ and /ī/ in both Massachusett classes of AI stems continuing those in PEA *ī, but the classes would have remained distinct in the third person independent indicative, the basic member of the paradigm (Watkins 1962:6, 90ff.), because of the suffixal *w in these forms. The vocalism of these third-person forms was then, to some extent, generalized throughout the non-negative paradigms. As might be expected, there is a residue of unleveled forms and doublets. Both types of stem appear to have /ī/ before the third person negative conjunct ending /k/ (← PEA and PA *-kw; §13), presumably by analogy to the other negative forms in which the /ī/ stood before *w: nékeekig 'those who are (not yet) born' (T 81; cited without negative particle, but see Rom. 9:11), beside nékitcheg 'those who were born' (< PEA *nīkī- < PA *ni·ki-). Perhaps the /ī/ that both classes appear to have before the plural imperative ending *-kw is due to contamination from the assumed replacement of /ə/ by /ī/ before the *-kw of the conjunct negative (examples in preceding paragraph). The third person conjunct seems to have (i) in many cases in what are otherwise /ī/-stems: ka(w)it 'he who sleeps' (kouéu 3sg.); monchit 'he who goes' (nummonchem 'I go'); n8kit 'he who descends' (n8keu 3sg.); quágquit 'he who runs' (quogqueu 3sg.). One verb, at least, has generally /ə/-stem forms in Eliot, but is an /ī/-stem in Cotton: wutohtu 'he dwells (in that place)', k8toht 2sg., wadohket 3sg. ppl., wadohkitcheg 3pl. ppl. (Jer. 51:24), wutohkinneat indef.-subj. t-subord. (T 209); k8tŏhkeem 'you dwell at (that place)', kootohkeonkanit 'at your place' (derived noun pointing to 3sg. *wutohkeu; C 64, 100).

The origin of the two classes of AI stems in Massachusett and Delaware that contine stems basically in PEA *ī must lie in a differentiation that had already arisen within PEA. Presumably, as in Delaware, the only difference between the two classes was in the third person independent indicative forms; one had *-əw (pl. *-əwak), the other *-īw (pl. *-īwak). The classes are kept distinct in Delaware and Massachusett-Narragansett (at least) but fall together in Abenaki, in which the descendants of both types have third person -o (pl. -əwak): EAb àso 'he fares so' (: Mass usseu 'he does (it)'), màčo 'he moves' (Siebert, Conference on Algonquian Linguistics, Ottawa, 1964).

The ultimate origin of the two PEA classes cannot be specified with complete certainty. Several PEA stems in stable *ī continue PA stems in *i, but most appear to continue PA stems in *i· (specifically with the finals PA *-i· and *-yi·): Mun šḱí·w 'he urinates' < PA *šekiwa; Mun sáḱwi·w 'he spits' < PA *sehkwiwa (reshaped iconic stem); Mun pó·si·w 'he gets in, on a vehicle or watercraft' < PA *po·siwa (but Mass p8suog 3pl.); Un kwsí· 'he moves (his

residence)' < PA *kwesiwa; Mun má·či·w 'he goes home' < PA *ma·čyi·wa; Mun tóhki·w 'he wakes up', Mass t8hkeu < PA *to·xki·wa (> K toohkii-); Mun kčí·w 'he goes out' < PA *keči·wa (> K kecii-). In particular there is a fairly productive class of AI stems indicating general motion that have the final PA *-i· (with no II counterpart) added to general roots; there is only a minimal lexical overlap among the sets of stems of this type in the different languages (e.g. *keči·wa), an index of its productivity, but the formations are clearly cognate: K aamii- 'move', anemii- 'go along', askwii- 'remain behind', kekenii- 'go quickly', kiihkii- 'move on', noii- 'go outdoors', paanacii- 'go down' (Voorhis 1967:234-301, 1977:51); Mass chippeu 'he goes apart', kuhpeog 'they come to land (from a boat)', n8keu 'he goes down', omohkeu 'he gets up', quogqueu 'he runs', qushkeu 'he goes back', waábeu 'he goes up'.

PEA stems in unstable *ī are almost all from stems in PA *i or from middle reflexives, conventionally reconstructed as stems in *-o. Middle reflexives have *-o in all inflections in Fox, Ojibwa, and Shawnee, but Miami-Illinois, Menomini, and Eastern Algonquian all point to these stems having PA *-wi outside the third person independent (Cree, Arapaho, and Cheyenne provide no evidence, since *o and *wi fall together in these languages; Goddard 1979:63-64).

It is possible then, that by sound law PA stems in *-i, *-iwa 3sg., gave PEA stems in *-ī, *-əw 3sg.; PA stems in *-wi, *-owa 3sg., gave PEA stems in *-wī, *-əw 3sg.; and PA stems in *-i·, *-i·wa 3sg., gave PEA stems in *-ī, *-īw 3sg. There is evidence, however, for both PEA *əw and *īw as reflexes of PA *iw: PEA *nexkīwan 'my nose' < PA *nexkiwani; PEA *nəhčəw 'the fleshy part of my upper arm or lower leg' < PA *nehčiwa. Hence the treatment of PA stems in *i in PEA could have been more complex than this outline suggests; some PEA stems in stable *ī could have been inherited directly from PA stems in *i. Alternatively stems like PEA *šəkīw 'he urinates' (< PA *šekiwa) could have arisen by analogy to the class of stems consisting of a general root and a final *-ī (with stable *ī); the analogical explanation is favored by the difficulty of formulating a sound law that would not affect the PA *i in words like *šekiwa but would change PA *i to PEA *ə in words like PEA *apəw 'he sits' (< PA *apiwa) and PEA *pəkəw 'gum' (< PA *pekiwa). Another exception to the sound laws implied in the outline first given is in the negative, where PEA retains PA *i and *o as PEA *ī and *ō before *w (Goddard 1979:98, and discussion above); since the PA *o in this case is the connective *o that appears between a consonant and the negative affix *w its retention as PEA *ō would be difficult to explain as analogical, unless it could have have been generalized from the third singular conjunct PEA *-ōkw < PA *-okw-. It is probably relevant in this connection that in the resulting PEA AI paradigms stems that show umlaut of *ī to *ə and of *ā to *ē before third-person *w (Goddard 1979:15, rule MP-8c-d)

both retain the stem vowels without umlaut before the negative *w. But, to summarize, whatever the details of the origin of the two PEA classes, those in stable and unstable *ī, after the replacement of PA high vowels by PEA *ə before *w in certain cases (also before *y) there was no (recoverable) contrast between the unaffected reflexes of PA *i and *i·; although the Massachusett facts are complex, they confirm the reconstruction of PEA with no opposition of length in the high vowels.

One verb not covered so far is the reflex of PA *ewa 'he says'. By sound law this became PEA *əw (> Mun áw); the irregular prefixed forms PA *nesi 'I say', etc., would have become by regular developments PEA *nəsī, etc. (> Mun nsí, nsí·m). Munsee directly reflects the PEA paradigm, but the other languages for which data are to hand have replaced all or part of it. Massachusett retains only the prefixed forms: nussim 'I say' (and other first and second person absolute forms), nussin 'I say it' (and other first, second, and third person objective forms); non-prefixed forms are supplied suppletively by the verb n8wau (/(ə)nəwāw/) 'he says' (T 92-3, 175). It is remarkable that the prefixed forms have a stem /-sə/, with /ə/ apparently from PEA /ī/, even though this vowel is found only in second syllables after a short-vowel initial syllable; note the unambiguous spelling in a native document from Martha's Vineyard: nissun 'I say it'. It seems, therefore, that the /ə/ in this verb could only be explained as analogical to the inherited, but now lost, third person absolute form *əw. This provides independent support for the explanation of at least some Massachusett /ə/-stems as having /ə/ extended throughout the independent order from the inherited /ə/ of the third person forms of AI stems in PEA unstable *ī.

In addition to the cases of retained /ī/ in AI stems that have been discussed, there are a few other Massachusett morphemes that appear to have /ī/ regardless of the phonological environment in which they occur. A number of words show a diminutive ending /-īs/: 8shesoh 'his uncle (i.e. father's brother)', diminutive of 8shoh 'his father'; see also the two kinterms discussed above. Mass /-īs/ is directly comparable to the diminutive /-is/ of Eastern and Western Abenaki. There is also a diminutive ending /-īmīs/, which indicates a further degree of diminution (El. Gr. 12) on nouns that also take /-īs/ but appears to be simply the usual, productive diminutive on other nouns: shepsemesoh 'lambs (obv.)' (Gen. 33:19). Apparently this is added to stems in /Cw/ with replacement of the sequence /w-ī/ by /ō/: mehtugk8mesash 'twigs, withes' (T 54), but mehtugquemes, unglossed diminutive of 'tree' (El. Gr. 12). The predilection of the Algonquian languages for long vowels before diminutive endings is well known. The AI final corresponding to II /-āy(ə-)/ ~ /-ā-/ (§14) is /-īsə/: menuhkesu 'he is strong', 2sg. kummenuhkes (Gen. 32:28); musquesu 'he is red' (cf. El. Gr. 13). The first vowel in

this final is spelled (e) in all examples noted except nussonkqus 'I am cold' beside 3sg. sonquesu (T 154; forms unreferenced). In Narragansett the (e) in this morpheme is typically written with a circumflex accent, which appears to be a partial indicator of vowel length: minikêsu 'he is strong', 2sg. cummínakese (/kəmənəhkīs/); wompésu 'he is white'; mowêsu, suckêsu 'he is black' (Williams 1936:52). There seem to be a few AI verbs in Abenaki with a final /-isi/ (beside II WAb /-a/, EAb /-e/), which can perhaps be compared: WAb (participles) sôglizit, sôglak 'solid, strong, durable'; kapagizit, kapagak 'thick'; wazabizit, wazabak 'thin' (Laurent 1884:68; -izi-, appearing in the AI forms, is /-isi-/); EAb nesañgherisi 'je suis ferme, forte, d'une forte c[om]plexion', nesañgherisi 'je suis fort' (II sañ´gheré 'cela est dur'); 8asabis8 abañn 'the bread is thin' (II 8asabé; Râle 1833:437, 454, 457, 487). This Abenaki and Massachusett-Narragansett final (which would have been PEA **īsī, if it had existed in PEA) replaces PEA *-əsī (with unstable *ī), which is inherited directly from PA *-esi; cf. Mun kohpăkásəw 'he (e.g. a nail) is thick', wá·psəw 'he is white', nsáksəw 'he is black'. Like PA *-esi AI, *-ya· II, and PEA *-əsī AI, *-ē (~ *-ēyə) II, the Massachusett final pair /-īsə/ AI, /-ā/ (~ /-āyə/) II, is used after certain adjectival roots to indicate the predication of the quality denoted by the root; the resulting verbs differ from the corresponding prenouns formed from such roots in grammatical category but have the same, basic, unmodified semantic content. The closeness between these verbs and the corresponding prenouns is clear from the presentation by Laurent (1884: 65-73), a native speaker of Western Abenaki; note, for example, the prenouns sôgli 'solid, stout', kpagi 'thick', and wazabi 'thin' beside the verbs cited above. This relationship suggests that the AI finals Mass /-īsə/ and Abenaki /-isi/ may owe their first vowel to the prenoun final Mass /-ī/, Abenaki /-i/; as in other Algonquian languages the close juncture between a prenoun and the following noun has prevented the loss of the prenoun final PA *-i, which is reflected regularly as PEA *-ī (another factor perhaps influencing retention is mentioned in §28). The extension of this vowel from the prenouns to the AI verbs, or a renewal of the analogy between these formations, would account for the failure of the /ī/ in Mass /-īsə/ to undergo weakening.

The reflex of PA *-iki, the animate plural ending used in participles, is written both (-ig) and (-eg): nékitcheg 'those who are born', nékeekig 'those who are (not yet) born', kaécheg 'those who sleep'. The significance of this variation is not known.

43. Massachusett /əw/ (< PEA *əw) has been given as an environment for the palatalization of *k (§§39, 40). Since the cases of PEA *əw that cause palatalization reflect PA *iw or *yiw, the possibility that the palatalization in such cases is just a normal instance before weakened PA *i before

a labial needs to be considered, and in fact other explanations of palatalization have taken the PA *i or *y in such cases as the conditioning factor. There are two lines of evidence that point to PEA *əw as the correct environment, dialectological and phonological. The dialectological evidence is simply that the development of /əw/ (or its reflex) from PA *(y)iw is found in all the Eastern Algonquian languages, while the palatalization of *k is found only in the Southern New England subgroup. Considering the wide geographical distribution of the Eastern Algonquian languages, it is extremely likely that the shift of PA *(y)iw to PEA *əw had been completed well before the period at which palatalization arose among Massachusett and its close relatives. The phonological evidence is exemplified by the noun pittu 'pitch'; this is /pətʸəw/ < PEA *pəkəw < PA *pekiwa. The relevant historical phonological rules are the following: (1) PA *i > PEA *ə /__*w; (2) Other PA > PEA rules (PA *e > PEA *ə; PA *i > PEA *ī); (3) Palatalization (PEA *k > Mass /tʸ/ before *əw or a PEA *ī that is subject to Rule 4 and followed by a grave consonant); (4) Weakening (PEA *ī > Mass /ə/ under certain conditions; §§38; 42). Table 1 shows the effects of these

Table 1

The Effect of Certain Sound Laws on Three Nouns

PA	*pekiwa	*sa·kima·wa	*sakime·-ns-a
1) PA *i > *ə /__*w	pekəwa	"	"
x) Irrelevant rules	pekəw	sākimāw	sakimēns
2) PA > PEA rules	pəkəw	sākīmāw	sakīmēns
3) Palatalization	pətʸəw	sātʸīmāw	"
4) Weakening	"	sātʸəmāw	"
y) PEA > Mass rules	"	sątʸəm	sakīmās
Orthography	pittu	sontim	sogkemas
Gloss	'pitch'	'chief'	'mosquito'

rules on three representative nouns. It is clear that elimination of Rule 1 would produce incorrect outputs, because whatever is done to prevent palatalization in 'mosquito' will also prevent it in 'pitch' and because position before *w is not an environment for the weakening of PEA *ī (§42).

44. Throughout this paper the reflexes of PEA *ī in Massachusett have been considered to be /ī/ and /ə/. Since these are the only reflexes that can be clearly demonstrated from the orthographic representations used, this is the

most economical view of how PEA *ī was treated. Some forms, however, suggest that the situation may be more complex. In most cases the spellings of the weakening of PEA *ī are indistinguishable from those of PEA *ə, typically (u) and (i), but (i) seems to be more frequent as a spelling of the reflex of PEA *ī. In large part this can be ascribed to the fact that in many such cases Mass /ə/ either follows /tʸ/ or precedes a consonant that is followed by infection (/ⁱ/). There is a residue of cases, however, that is not so easily explained. Most prominent is the third-person singular of AI stems in /ə/, which seems always to be spelled (-it) except in a few cases after /Cw/: áqut 'what he wears', beside agquit (< PA *akwi-); kadtupwut 'when he was hungry' (< PA *katw-epwi-, middle reflexive). This contrasts with the locative /-ət/, for which the spelling (-ut), beside (-it), is fairly frequent (T 176). On the other hand, there are other morphemes with the sequence /ət/ that always seem to be found with the /ə/ spelled (i): muhpit 'an arm' < PA *mexpetwini. Perhaps, therefore, the relatively constant (i) in the third person conjunct indicates a tendency to standardize the spelling of this ending. A small set of forms suggests that there may have been a special development of *ī when weakened before /hk/ or /hp/: wutompeuk, wuttompek 'his jaws', wutombeukan88ash 'their jaws' (for -8oash), wutompukone (prenoun) < PA *meta·Qpixkani (Goddard 1974a:108); agkemahetteupoh 'when they numbered them' (Num. 26:64) < PA *-āhətīhpan- (with added -oh). On the other hand, perhaps (eu), representing [ĭᵊ] or the like, is simply a spelling of /ə/ in certain contexts. A stem whose development supports the case for Mass /ə/ being the reflex of weakened PEA *ī even in the third person conjunct is PA *mi·či- TI 'eat'; in Massachusett this has become synchronically a consonant stem /mīč-/, taking in the conjunct, for example, the endings /-Ø/ 1sg. and /-ək/ 3sg.: meech 'what I eat' (2 Sam. 19:35); meechik, meechuk 'he who eats it'.[17] It is difficult to see what could have motivated this reshaping if the second vowel of the stem had not become /ə/ and been reinterpreted as the connective vowel used after AI and TI-3 consonant stems. Compare the parallel reshaping in Menomini, in which PA *i and *e regularly fall together to /e/ after a long-vowel syllable; neme·cen 'I eat it' (< PA *nemi·čini) and other forms were reinterpreted as consonant stems with connective /e/, whence me·can 'when I, you (sg.) eat it', me·cek 'when he eats it', etc., were formed on the regular pattern. The *č in this stem guarantees that the stem-final PA *i must be old and that the Menomini and Massachusett formations cannot, therefore, be cognate.

45. Finally, the opportunity may be taken here to point out the productivity of the Eastern Algonquian hypothesis (Goddard 1980) in interpreting the history of Massachusett. Many cases have been seen in which comparison with other Eastern Algonquian languages leads directly to an understanding of the Massachusett facts; these range from individual etymologies to major structural categories such

as the negative and the two classes of AI stems in PEA *ī. The test of an hypothesis is that it be productive, that it provide a framework for understanding facts not considered in its initial formulation. The comparisons made in this paper show that the Eastern Algonquian hypothesis passes this test.

NOTES

[1] The need to reserve the name Natick for the dialect of the records from the town of Natick (in English /néytik/) makes the use of this name for Massachusett as a whole inappropriate. The contemporary English name of this language was Massachuset, as on the English title page of Mayhew (1709); the spelling Massachusett (like Narragansett) conforms to the modern place-names. The language has also been called Massachusetts (Du Ponceau edition of Eliot 1822; Trumbull 1877; Pilling 1891), but this is historically an English plural and accordingly not really suitable as a language name. Some Algonquianists have, unaccountably, used Massachusee (Trumbull cited in Pilling 1891:498; Siebert 1975); this is the Massachusett prenoun (Mayhew 1709, Massachusett title page) and has no claim to being accepted as an English name.

The native documents cited were assembled by K.J. Bragdon; I am indebted to her diligent labors.

In citing forms from Trumbull (1903) an attempt has been made to use only those for which a biblical citation is given. This is because, although Trumbull is highly reliable when citing forms directly, he did not understand all of the patterns of Massachusett morphophonemic alternation and occasionally makes incorrect forms for use as head words. Also, Trumbull's hyphens, diaereses, macrons, and breves have been omitted.

The names of the languages are abbreviated before cited forms as follows: C = Cree; EAb = Eastern Abenaki (Penobscot and Caniba dialects); F = Fox; K = Kickapoo; M = Menomini; Mass = Massachusett; Mun = Munsee; Narr = Narragansett; O = Ojibwa; Sh = Shawnee; Un = Unami; WAb = Western Abenaki (St. Francis dialect). In giving etymologies the following distinctions are made: > = becomes by sound law; < = reflects by sound law; ← = continues (reshaped).

Quasi-PA and quasi-PEA reconstructions are given with two asterisks, and the constituent morphemes are sometimes set off by hyphens; such forms are either assumed not to be of proto-language date or are uncertain in shape or meaning. The letters and letter combinations of Massachusett orthography are cited in parentheses, and presumed phonemic transcriptions between slashes. Underlying forms, indicated for Delaware, are between vertical bars.

[2] This indeterminacy seems to exist for the Narragansett correspondent of Mass /š/ from all sources, and (sh) sometimes appears for /s/; probably these phonemes were distinct, though for some reason they gave Williams trouble. Mohegan-Pequot also has /š/ corresponding to Mass /š/; this shows that the divergent reflexes of PEA *r in southern New England must have arisen quite late, after *r had become /š/ word-finally and when following PEA *h.

[3] The statement that PA *w is not retained after PEA *t, *n, or *r (Goddard 1980:147, §1.4) is incorrect. Note also anwôhsin 'he rests himself, takes rest' (T 12) with a root PEA *arwā- (Mun ala·xí·məw 'he is resting') related to PA *alwe·- (Moose C alwe·piw 'he takes a rest').

[4] The same analysis of these forms is implied by Siebert (1975:409).

[5] An unhistorical /h/ also appears in n8htau 'fire' (Ps. 11:6), n8tau (Ps. 11:6, metrical version); noohtau, noohteau (MV in Mayhew 1709, Ps. 11:6, 18:8); cf. Mun ló·te·w 'it burns'. Perhaps this has been contaminated by chikohteau 'it burns', chikkoht 'fire' (C 86).

[6] Eliot used the locative mayik in his early translation Manitowompae Pomantamoonk (1665), cited by Trumbull (T 121). This must be a form from a Natick speaker.

[7] The range of spellings for Mass /ā/, in contrast to those for /a/ (§30), proves that these vowels have not fallen together, as claimed by Siebert (1975:442), although they have fallen together in Western Abenaki.

[8] Cf. Siebert (1975:326), with incorrect readings of (t) for (r) in the Powhatan forms. The Fox and Kickapoo forms show a treatment of dependent noun stems in *-ay attested also in F meko·te·weni 'a dress', oko·te·hi 'her skirt' (cf. Mun wăkó·tay 'her petticoat'); incidentally these Fox forms and others refute the idea that contraction of *aye to *e· was not found in the Central languages (Proulx 1980:3, 1980a:289-91).

[9] The final in this stem is perhaps to be reconstructed as PA *-epat TI-2, rather than *-pat TI-2; see §39, last paragraph. Menomini may require PA *-epyat TI-2.

[10] On the other hand, ket8hkaj 'let him speak' (T 45) can only have /-ōhkā/. Apparently the verbs in PA *-o·hke· AI had derived applicatives with **-o·hkaw TA (T 19, 171); the unpalatalized /k/ could have been generalized from these derivatives.

[11] In nummahche neetti 'I am born' (C 40) there seems to be an isolated example of word-final /-tʸ/ written as (-tti); if so, this is clear evidence that word-final /-tʸ/ was distinct from /-t/. For the probable origin of /-tʸ/ in such forms by paradigmatic analogy, see §40, last paragraph.

[12] Another possible example is matukken8og 'they are great', matikenukeg 'great ones' (T 51; association of spellings with endings not certain because Trumbull cites only wrongly coined singulars as complete forms). This stem is the suppletive plural to missuken 'he is mighty', masugkenuk 'he who is mighty', reflecting PA *meʔθekiθwa with mutation in the stem analogical to the corresponding II missi (as in other languages); the root is PA *mank- 'big (pl.)'. Given the mutation in the singular stem, it is possible that the /ə/ has been reinterpreted synchronically as a weakened PEA *ī, which would cause both mutation and palatalization.

[13] Actually, as seen above, the consonant following the *i would not have provided an environment for palatalization even if the *i had been weakened.

[14] But a note (Pentland 1979:274, note 8) makes this unclear by claiming that palatalization took place before "inserted epenthetic -i-" before PA *y, which the examples of the supposed epenthesis show is not the case. For secondary /əy/ as an apparent continuation of post-consonantal PA *y see §14.

[15] Infection gave rise to two variants of the subordinative endings that begin with the sequence /n/-plus-vowel. Beside the usual forms in -nan 1pl., -nau 2pl./3pl., -nat indef. t-subord., etc., there are -nean, -neau, -neat, etc. The distribution of these two sets is no longer strictly governed by whether or not the stem to which they are suffixed ended in a weakened *i, though this is still the observable tendency. Some cases of (nea) may simply represent /nā/ rather than /nⁱā/, however. In one word that has been noted infection occurs apparently by some unidentified contamination: pemunneaht 'cord, string'; peămenyaht 'cable', peminneaht 'line', peminneat 'halter' (C 14, 9, 42), < PEA *pīmənahtān 'cordage' (with the stem PA *pyi·men- TA, TI 'twist, roll, by hand' as the derived initial; cf. Mun pi·mănáhta·n 'thread').

[16] It is assumed that PEA had *əw from some cases of PA *(y)iw; the generalizations here refer to the PEA *ī that existed after the development of *əw (§43).

[17] Trumbull gives the third person singular absolute as: meechu, meech 'he eats (it)'; meechu can directly reflect PA *mi·čiwa (§3), but synchronically it conforms to the regular inflection of stems ending in a consonant other than /n/ or /m/, which have third singular absolutes in -Ø or /-əw/: mag8, magou 'he gives (it)', beside ummagun 'he gives it' (< PA *mye·k-); nup, nupp8 'he died' (< PA *nep-).

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ADDENDA ET CORRIGENDA

§1. The form ahshop cited by Siebert (1975:362) as from Ps. 140:35 of Eliot's translation, is in fact from Mayhew (1709, Ps. 140:5); Eliot has here wutashabp8uh 'their net(s)'.

§10, ¶3. Apparently PEA had *nīwaš 'my pack' with the mutation of PA *θ retained.

§14, ¶3. I would now reconstruct the II forms discussed here as having PEA *-ēyəw ~ *-ē-, directly reflected in Massachusett. Maliseet-Passamaquoddy has -éyo (< PEA *-ēyəw) and has generalized this long stem to the conjunct (in the form -eyi-), as has Micmac (with -e·-). The Delaware and Abenaki languages have generalized PEA *-ē-.

§27. After the loss of PEA *-h in the singular imperatives, Maliseet-Passamaquoddy added -n in most forms.

§39, ¶2, l. 10. For 'that which is thick') read 'that which is thick, thickness' (participle, with initial change, of II verb from PA *kexpak- 'thick').

§39, ¶4. The form pitteu implied by Trumbull (T 126) is not citable. In Ps. 68:2 Mayhew has pittu and Eliot has the English word wax; in Is. 34:9 Eliot has pittuut 'pitch (loc.)' and pitteu8 'it becomes pitch'.

§42, ¶7. Regarding "unstressed Abenaki /i/": Stress appears to be relevant only for the environment before /m/ and after a long-vowel syllable, where stressed EAb /i/ does occur.

§42, ¶10, l. 14. Eliot has: ash nékeekig '(those) being not yet born' (Rom. 9:11).

§42, ¶10, l. 20. For examples in preceding paragraph read examples two paragraphs above.

§44, l. 14. For third-person singular read third-person singular conjunct.

The Use of the Verbal Enclitics in Malecite

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There are four verbal enclitics in Malecite: one for the preterit: (h)pən (or əpən), two for the future-dubitative-conditional functions: (h)c (or əc) and (h)p (or əp), and one for the conclusive: (h)s (or əs). Maximally two of these four enclitics can occur together. In the present paper, these four enclitics, their co-occurences, and the ways they function in sentences will be investigated.

I. First we shall investigate the enclitic (h)pən, which expresses past action. This enclitic always joins the verb, never a particle, an adverb or a noun. It is not obligatory to mark a past action, but if the speaker wants to be specific about the past action, he can use this enclitic, e.g. nil n-wasiswīhpən 'I was young'. In other sentences, this enclitic brings out a very definite past meaning, something like the past perfect in Indo-European languages.

Here is an example for this function: there are three verbs and three actions in the following sentence. All of them happened in the past, but the enclitic -hpən appears only in those two verbs which express the earlier actions:

1) ma-na ceska itəmōwi mācehēhpən / kəsnā pēciyēhpən 'he did not even say (whether) she had gone away or (whether) she had come'

Enclitics usually follow all suffixal endings and even certain particles, but in the case of the enclitic -hpən, this is not always true. It may be followed by an obviative ending:

2) tlīwiyapənil iyil 'they named him'

In conjunct forms with the enclitic -hpən, even the person-number marker -k can follow the enclitic -hpən:

3) ma-te-n-na yoktək kcicīhkwəsiwiyik /yokt kisi-nēhpot-pən-i-k 'those did not hear about them, about those who were killed'

The particles -tāhk or -te usually follow this enclitic:

4) n-sesmitahatəmənēhpən-tāhk 'I was wondering about it'

5) leyōhpən-te nīta 'that is the truth'

What forms of the verb can the enclitic -hpən join? Very often it is an indicative verb:

6) pəlecməni monīhk liwisōhpən 'French Monica was her name'

7) nocitkwənhket-na nit tətli-witlōhkēhpən 'the policeman was working there, too'

The indicative verb can have the negative final -w before the enclitic -hpən:

8) wət-lo skīcin / mēskw-ə-te cpāhkatmowīhpən 'and this Indian was not married yet'

It does not happen very often, but it can be there in a relative verb, following the relative mode marker (ə)n:

9) nīta / sowāhsin nit tətləlōhkanēhpən 'there John was working'

10) sosēhp nēket eləwe-te / tocēyinēhpən / petapasiyek 'Joseph, at that time, was nearly of that age when we arrived'

It is very common joining any conjunct:

11) nit-kāhk-ə-lo / eli-wewitahamok-pən nil 'that is the way I remembered him'

12) psiw nit / el-lokhətiyek-pən skōlək 'all the work that we did at school'

13) nit ewikit-pən 'there he lived'

No matter whether it is an indicative, relative or conjunct verb suffixed with this enclitic, the Malecite speaker might feel that he needs another reference to the past if he wants to make it clear that the action happened in the past. This second reference can be expressed by the adverb pīhce 'a long time ago':

14) nīta / ā / pīhce nit / notmowanēhpən 'that, oh, I heard that a long time ago'

15) nit ēhta / kwin leyōhpən pīhce 'that was true, (and) it happened a long time ago'

16) məcikō-hpən tēmis / eywok-pən /pīhce 'it was bad, the dog I used to have a long time ago'

This second reference to the past can be expressed by the past marker preverb kis(i):

17) kakēhs nit / wen kisaknotmənēhpən 'many a time someone told a story about it'

18) nət ēhpit / kisi-nēhpohot-pən 'that woman, the one who was murdered'

It is possible that the adverb pīhce, the preverb kis(i), and the enclitic -hpən all occur, and in this way in a short sentence there might be three references to the past:

19) pīhce nit kisi-leyik-pən 'that happened a long time ago'

The same kind of second reference to the past can be expressed by the adverb nēke(t) 'at that time':

20) nil lo iya wət etlanhkeyowit-pən nēket 'this is the one who took care of me ... at that time'

The preverb kis(i) can be used as a third reference to the past along with -hpən plus nēke:

21) kis-te elwe-te skinōhswiwōhpən nēke 'he was nearly a young man at that time'

The enclitic -(h)pən is actualized as -pən in a relatively small number of sentences. Sometimes it happens after a consonant and sometimes after a vowel. On what does it depend? I think it depends on the morphological elements present in the verb. I have found it in the following verb forms:

a) After the real plural marker -olht-, when there is some additional ending after the enclitic:

22) mətewolənəwolhtopənik 'they were witches'

b) Even without the real plural marker, if there is an ending (for instance obviative) following the enclitic:

23) tlīwiyapənil iyil 'they named him'

24) pīhce nəmiyapəni skicīno / el-lok-hət-ī-l-it 'a long time ago he saw Indians doing that'

c) I have also found this enclitic actualized as -pən following the inverse theme sign -(ə)k-:

25) nit-yakw-lo nil ihimhkəpən 'that is what they told me'

26) liwiyokopənik 'they called me that'

II. One of the future-dubitative-conditional enclitics in Malecite is -(h)c (or -əc). It can express future:

27) nītəc apc taknotmən tepəno 'again I will talk about it later'

It can also express hortatory action, something that should take place:

28) ckowi-mətāpahac 'let her come down'

It can express conditional:

29) skōlmēhsəs macīhpōso-tē-hc 'the schoolteacher would shake'

If this enclitic is added to a verb that follows the prohibitive preverb mosa, it has a prohibitive meaning:

30) mosa kisāhkwahac 'do not go up the hill'

In three of the four sentences quoted to show the functions of this enclitic, it joined the verb. In those three sentences where it joins the verb directly, it is actualized as -c. In the second last sentence there is a particle te after the verb, and the enclitic follows this particle (actualized as hc). (The e in the particle becomes long before the enclitic.)

In the sentences we have seen so far, the enclitic -(h)c (-əc) joined the indicative verb. Very seldom, it can join a relative verb:

31) k-peciptōlənhc / kekw-sey 'I will bring it to you, something'

32) tamā miyaw-te kətĪliyāyin təliphōlənhc 'if you want to go anywhere I'll take you there'

But the sentences we have seen so far with this enclitic are not very common. Most often, this enclitic does not join the verb, but something before the verb: a preverb, a particle, a group of particles, a noun, an adverb, or even a sentence conjunction. Here it is with a preverb:

33) n-tāhcowĪhc ... iyey ... / yot etli-nimkpaha 'I have to... hm..., here is where I turn off'

Here it is joining a group of negative particles:

34) ma-kal-tē-hc noli-kcicĪhtōwən 'I will not be able to know it'

It can join the personal or the demonstrative pronouns, resulting in complexes like nĪləc 'I will...', kĪləc 'you will', tānəc 'what will...' etc.:

35) nit-ə-lo tānəc-lo təke k-təhlōhkan 'what will you do now?'

36) nĪtəc sikwəniw apc 'that will be in spring time again'

The enclitic joins very often an adverb or an adverb plus particles. Thus we find complexes like apc-əc 'again ... will'; təke-c 'now ... will'; nĪt-əc, nit-tē-hc, nit-yakw-tē-hc (but also: nītəc-yakw), nit-ēhta-tē-hc 'there ... will'; miyaw-tē-hc 'sure, ... will'; spasəwiw-c 'in the morning (or to-morrow) ... will':

37) spasəwiw-c n-pēci 'tomorrow I'll come'

It does not happen very often, but this enclitic can be added even to a noun:

38) Ī / tan-pal n-tlitahāsin / mīhtakwsəc nēhpaha 'oh, how could I know that I would kill my father'

This is the only enclitic that can join the sentence conjunction ən:

39) ənəc wət cənehsin ahāsit /wen nət 'and then he stopped behind them, this person'

40) ənəc tahālo n-sek-hpawolan 'and I would kind of scare them'

We can make two more observations about this enclitic:

a) If it does not join the verb, no matter what it joins, a pronoun, a noun, an adverb or a conjunction, it must be placed at the beginning of the sentence, or at least not after the verb.

b) The enclitic əc (hc) is never added to a conjunct. Even in the sentences where we had it on adverbs, pronouns etc., the verb was something else, but not a conjunct.

III. The other future-dubitative-conditional enclitic does not behave exactly in the same way as the enclitic -əc (-hc). While the enclitic -əc (-hc) is rather common in all three of those functions (future, dubitative, and conditional), the most typical use of the enclitic -əp (-hp) is conditional.

Very seldom, it can express future:

41) kat-al-tē-hp-ə-na nonitahāsīwən 'I think I'll never forget it'

Mostly it expresses a conditional meaning:

42) kātəp n-kisi-mahaw 'I could not eat it'

The enclitic -əp (-hp) can join the verb but very seldom. There can be a particle (or particles) after the verb, and the enclitic joins actually those particles:

43) maha-tē-hp yot-te tamā ihit 'I would eat it if it were somewhere around here'

44) kisi-ksehe-yakw-tē-hp / nət iya wahanht 'it would have come in, this here, the devil'

Similarly to the enclitic -əc (-hc), the enclitic -əp (-hp) joins usually another word in the sentence, not the verb, and this is often the first word in the sentence, or at least, it cannot be placed after the verb. It can join the adverbs cipətok (cipətok-te) 'maybe'; tan 'where, how'; wecəwaw (plus particles) 'near':

45) cipətok-tē-hp / k-nēhpohōkok 'maybe, they would have killed you'

46) ən tlitahāsin / tali-kilwāpin / tānəp eləkwiyak / yot iyey / kās 'and I thought to look around where it would go, this here, the train'

47) wecəwaw-kāhk-əp-ə-lo / iyey kisi-liphol 'near where I could take you'

It can be used with a demonstrative pronoun without any verb:

48) elmikətək / iyey nītəp 'as the years went by, hm, that would have been'

It very often joins the particle tahālo (-te) 'as if, just, like' (tahalō-hp, tahālo-tē-hp):

49) tahalōhp n-tihin 'I'll just get it'

50) nakā siskol / tahālo-tē-hp / skwətēwēyal 'and the eyes were like fire'

Unlike the enclitic -əc (-hc), the enclitic -əp (-hp) can be followed in the sentence by an indicative, relative or conjunct verb. Indicative:

51) yoktək-lo iya / kis tahalōhp / mace-enəwiyawlətowok / skicinowok nēket 'those here, as if they started to get better, the Indians, at that time'

Relative:

52) tānəp nikt n-təli-kisi-nēhpahan? 'how could I kill them?'

Conjunct:

53) sesmitahasolhtowok / wēnəp nīhtəl kisi-nēhpahat 'they wondered who killed him'

IV. The conslusive enclitic -əs (-hs) can be used in the following functions: to express the uncertainty of an action which happened in the past ('it must have been'):

54) ma-te-n-na kəcīciyāwīwal / wen kisi-əl-lōhket-s 'they did not know who did it (who might have done it)'

It can be just another way to express past action:

55) ən-yakw / sənōciw kisīhtonehs-yakw miyāhs / kisīhton sənolhsis 'and along the shore, he made it early, he made a raft'

It can be used in a 'why not?' question, asking about a past action:

56) ska wen toktahawēhkwəhs? 'why didn't you wake someone up?'

It can indicate which one of two past actions happened earlier:

57) ma-te-l-lo itəmo / tan tōciw / oci-mācahanehs 'but he did not say what time she left'

We have seen in the quoted sentences that this enclitic joins the verb, and not the pronouns, adverbs, etc. We have seen also that it can join a conjunct (kisi-əl-lōhket-s), or a relative verb (mācahanehs). It can join an indicative

verb. Here is a negative indicative with the conclusive enclitic:

58) peskōhs-lo mate wəli-mēhcinewihs 'one of them was not completely dead'

The most common functions of the conclusive enclitic are uncertainty and past. Adverbs can express a second reference to uncertainty or past. For instance: cipətok(-te) 'maybe':

59) cipətok-te nət kisi-tepehloks / nət ēhpit 'maybe, that was the one I put on (my vehicle), that woman'

cowal-lo 'sure, probably' (plus cipətok):

60) cowal-lo wen cipətok / tətli-nēhpahanehs 'it must have been, someone, maybe (someone) was killed there'

nēke 'at that time':

61) nakā nēke / tān-al tocēyinehs 'and at that time, I don't know how old I was'

pīhce 'a long time ago':

62) eci iyey ksīhtakwsits-yakw nət pīhce 'he was so very loud, that one, a long time ago'

Also the past marker preverb kis(i) can be there before the verb with this enclitic:

63) wen-al-lo nət skīcin / kisi-nēhpāhtəket-s 'I don't know who this Indian was, the one who did the killing'

Finally, one more question should be investigated. Two of these four enclitics can be used together. Which ones are there in the sentences in pairs, and in what sequence? Are the two enclitics in co-existence in one word or in two different words of the same sentence? Is it possible that the same enclitic occurs twice in the same word or in the same sentence? The real combinations are less numerous than the theoretically possible ones. I found only four combinations, and only two of these are actualized in the same word. The conclusive enclitic can co-occur with the preterite enclitic, in the same word. The conclusive comes first. E.g.:

64) təkēcəp skat / nət wāsəhsis / ihīhwəsəpən iyik 'if it was not for the baby that was there'

(After the oral presentation of this paper, Ives Goddard suggested that -əsəpən is not a co-occurrence of two enclitics (-əs and -əpən) but another conclusive enclitic. If we accept this interpretation we have to modify our statement about the number of verbal enclitics from four to five.)

In many sentences, where this combination is used, there is still a person-number marker suffix at the end of the word,

after the two enclitics:

65) cipətok-te-l-lo / wələmhətospənik 'maybe they were right'

66) tamā-al ci-pet-kawtospənik 'maybe from somewhere they came, from a distant place'

The only word where the two future-dubitative-conditional enclitics co-occur (-əc first) is təkēcəp 'if only':

67) təkēcəp wəlinəmowok 'if I only knew him well'

The adverb təke 'now' exists also without any enclitic. It exists also like təkec 'now', but in this case not necessarily with a future-dubitative-conditional function. (The form təke-p does not exist.) There is one more combination which I met in only one sentence: the word təkēcəc already has two enclitics -əc, and the same enclitic is there also at the end of a preverb in the same sentence:

68) təkēcəc k-tāhcowīhc macephōlan / nət skītap 'now, we'll have to transport this man'

I found two more co-occurences, but only in the same sentence, not in the same word. The enclitics -hp and -hpən can be there in two different words in the same sentence:

69) tahalōhp tətlīhpipənōhpən kekesk 'as if we were eating a little'

Similarly, the enclitics -hp and -s can be there in the same sentence, but not in the same word:

70) nēkəm tahalōhp noteks 'he himself heard it'

Language Shift in Northern Ontario

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This paper is an informal attempt to make some sense of anecdotal material collected mainly last winter in northern Ontario but from other sources as well. In 1979 John Nichols, Kelleen Toohey and I were contracted by the Ontario Regional Office of the Department of Indian Affairs, the Ontario Ministry of Education and three large Native organizations to study the ways in which English and the Native languages were being used and taught in northern schools in Ontario and to make recommendations on educational policies and programs regarding language. The study was called the Northern Native Language Project. The area under study consisted of the three Indian Affairs districts of Sioux Lookout, Nakina and James Bay. Together or separately the contract researchers on the project were able to visit seventeen of the communities in the study area. Our job was to collect information and opinions, not only on school programs and personnel but also on the roles played by English and the Native languages in the community.

The final report of the project focussed on pedagogical issues concerning school programs and personnel. What I want to discuss in this paper are wider questions of language proficiency and use in the communities and districts with the role of the school seen as only part of the social whole. Since our community visits were brief and the information we collected was very informal, no conclusions can be drawn at this stage. This paper, then, is an outline of areas in which further research would appear to be interesting and fruitful.

In order to see the study area in the perspective of language use by Native people across the entire province, we can begin by using that blunt instrument, census figures. In 1971 Canadians were asked to report their ethnic group (decided patrilinearly), their mother tongue, the language most used in their home, and whether they could speak English, French, both or neither. Examining the language information about people who reported themselves to be ethnically "Indian", one can get a general picture of the patterns of language for the Native population. On the basis of trends in the data I have divided the province into three areas mainly by grouping several Indian Affairs administrative districts together for each area. The southern area includes the Brantford, London and Peterborough Districts, and the mid-north includes the Sudbury and Fort Francis Districts. For the northern area I had to include the Lakehead and Kenora Districts with the three districts in the study area, Sioux Lookout, Nakina and James Bay, because of the way in which the census districts were set up.

Whatever concerns one has about the reliability of census data, one cannot deny the strength of the trends shown in the

figures on language. The data on the Native population indicates that Native language use is waning under English pressure. Not only do fewer than half of Ontario's Native people speak a Native language as their mother tongue but many of those who can speak a Native language use English as the major language in their homes. Virtually all (97.2%) who speak English as a mother tongue also speak it as their home language. But only 70.6% of Native mother tongue speakers still use the Native language as their home language. English has become the home language of the rest. This trend holds true when the school aged and older populations were considered separately. And English is more predominant among young people.

When we look at the north, mid-north and southern areas separately, the trend to less Native language use and more English use observed for the whole province was confirmed for each area. However, the extent of the change varied considerably in different areas. In the south of the province, Brantford, London and Peterborough showed only 12.5% to 17.7% of the population with a Native language as their mother tongue. Among children up to the age of 14, only 6.4% to 15.4% speak a Native language as a mother tongue. Also, the percentage of people who report their mother tongue to be a Native language but their home language to be English is between 57.7 and 93.5. There is no reciprocal trend to Native language home used by English mother tongue speakers.

In the Sudbury and Fort Francis Districts however, the trend toward English is not as advanced. About half the population speaks a Native language as mother tongue. Between 38.4% and 50% of the children learn a Native language as their mother tongue. Between 25.6% and 39.7% of those who speak a Native language as a mother tongue use English as their home language. Compared with the southern districts described above, the Native language situation in these mid-northern districts seems somewhat more stable, perhaps with active bilingualism in English and the Native languages as a major factor. It is difficult to assess the role of the Native language in the repertoire of the mother tongue Native speakers who also speak English.

In the North District, 79.2% of Native people report that a Native language is their mother tongue. Almost as many children as adults report the Native language as their mother tongue. Only 14.9% of Native mother tongue speakers report English as their home language. English in the north has yet to gain a real foothold. But where it is used, as in the mid-north or the south, English is being taken up as an alternative or a replacement for the Native languages. (See Burnaby 1980 for further details).

It is evident that the study area for the Northern Native Language Project, the Sioux Lookout, Nakina and James Bay Districts, is at the leading edge of a trend toward the replacement of the Native languages by English. There is no reason to assume that the shift from the Native languages to English will necessarily occur in the study area as it has further south in the province. Other possibilities may be

that the Native languages will maintain their hold as the only language of the majority, or various forms of stable bilingualism may occur. From an academic point of view, now would be a good time to document information about language use and community factors which might influence it in order to gain some insight into the phenomena of language shift, or bilingualism or minority language maintenance. Whatever happens, the information would be useful in our understanding of how and why certain school language programs succeed or fail and would also be valuable in language planning.

The most intuitively obvious hypothesis about change in language patterns is that sheer volume of contact with the second language is enough to explain increases in use of English. The study area is distinctive in relation to the rest of the province in that almost all of the Native communities in the area are not connected with the "outside world" by road. It is certainly the case that communities which have road links and have had them for some time, such as Long Lac and Constance Lake in the south of the Nakina District, have shifted to English much more than fly-in communities. However, isolation is certainly not the only factor. Constance Lake has much more Native language use than Long Lac, for example. Among the fly-in communities, a few have almost as much English language use - indeed shift entirely to English among many children - as does Constance Lake. Fort Hope in the Nakina District is an example.

The role of broadcast media in language change deserves study in this area as well. Until a few years ago regular radio and television broadcasts could not be received in the study area. Now the placement of satelites has permitted good reception in some communities. In Fort Albany, where public television and radio has been available for two years the children were prepared to talk in English to outsiders such as myself mainly about what they had seen on television. In communities which have their own radio stations the languages used in the broadcasts seem to reflect the language patterns of the communities and do not seem to be an agent for language change. Many Native people interested in Native language maintenance mentioned to us that they regret or fear the advent of public media in the community. So little has been documented on the language effects of the introduction of broadcast media in Native communities that generalizations at this stage would be worthless. The superficial information we have here suggests that simple volume of contact with English language use is not a subtle enough factor to predict patterns of changes in language use in the study area. Time and specific study on language use are needed before the effects of this factor can be clearly understood.

My next hypothesis concerns the instrumental value of being able to speak English. Surely people learn to speak another language at least partly because it is useful to them. In certain communities in which the Native language is used for almost every function in the community, such as Kingfisher Lake or Webequie, it appears that only certain

individuals become bilingual and that their bilingualism is related to the fact that they need to use English for their jobs - teacher aide, band manager, airport manager and so on. My hypothesis is that the bilingualism of these individuals was not motivated by the economic advantages of English proficiency but rather that they got the jobs because they already knew some English. They may now be better English speakers than other individuals because they have had more chance to practise, but that factor came after economic considerations not before. Also there are often a number of hidden bilinguals in Native speaking communities who can speak English but who rarely use it. Some of these bilinguals learned English when they left the community to work elsewhere, have returned to the community and now rarely use the language. But there are many other hidden bilinguals who learned English during protracted stays in hospitals or other non-economically motivated sojourns away from the community. Parents, school committee members and the National Indian Brotherhood (1972) uniformly voice the opinion that children should learn English in school in order to get good jobs. I suggest that this economic motivation probably has little effect on the learning of English whether by children or adults. Let me give another example on this topic. The Constance Lake Reserve is in a French speaking area. Although there is a fair amount of employment at the reserve owned sawmill, a good number of people from the reserve have been employed for many years in off reserve industry. The language medium in these industries is French. I asked several people on the reserve and at the schools attended by the children if there was an interest in or pressure for the Native children to learn French in school in order that they might get better jobs. The replies were unanimous that the Native employees always learned enough French on the job to manage and that there was no need for them to study French before or during their employment. French is not used for any type of communication on the reserve. It should also be noted that there did not seem to be any impediment in that area to Native employees rising to positions such as foreman or above if their French was adequate. In other words, it appears that Native people in the study area are prepared to learn a second language for instrumental purposes, but that they are not motivated to learn the language in anticipation of need and use of the second language under such conditions does not spread from the instrumental use into other aspects of their lives.

In order to learn what does motivate Native people to begin to learn English and to increase their use of English to the point of excluding the Native language, we need to have more information about community patterns of language use. In Native communities all across the continent it does not seem to be the case that some individuals become bilingual with the numbers of bilinguals steadily increasing over time until the balance of language use tips over to the English side and the Native language gradually fades away. The common pattern, instead, seems to be that the shift to English occurs in one generation and that almost all members of that generation in the community are involved. It seems that, at some point, all the young parents begin to

speak English as the main home language and the children grow up speaking only English. The parents seem to speak less and less Native language to the point where they no longer feel comfortable speaking it, and the children can not communicate with grandparents and other older adults. The community of Fort Hope seems to be in the middle of such a transition. Communities such as Long Lac and many others further south have almost completed the shift.

As a hypothesis to explain such a radical change in a community, the only factor I can suggest that might be powerful enough is the need for young people to express their identity through language. I am drawn to this factor by evidence from other language and cultural groups. The first example is from Labov on the subject of the failure of Black urban children to learn to read. He says (1973):

> "Some writers seem to believe that the major problem causing reading failure [among Black youth] is structural interference between [Black English Vernacular and Standard English]. Our research points in the opposite direction... The number of structures unique to BEV are small, and it seems unlikely that they could be responsible for the disastrous record of reading failure in the inner city schools. (p. 241)
>
> ...The conclusion from our research was that the major cause of reading failure is cultural and political conflict in the classroom." (p. 243)
>
> ...We usually find that the most consistent vernacular is spoken by those between the ages of 9 and 18. It is well known that in most cities peer-group membership reaches a peak at the ages of 15 to 16 (Wilmott 1966); as the young adult is detached from the teenage hang-out group he inevitably acquires a greater ability to shift towards the standard language and more occasions to do so." (p. 257)

Labov is arguing in his study that schools with the middle class majority culture orientation are powerless to influence the language habits of adolescents whose main motivation is minority peer group identification.

The second piece of information is evidence from the Canadian majority culture. Many English speaking children in Canada get French immersion schooling, that is, schooling through the medium of French, in order to teach them French as a second language. They succeed remarkably well in learning French - particularly in pronunciation. However, it has been observed that many of them, at the age of about ten, lose their excellent French accents and begin to use a markedly Anglophone accent. It is speculated that this change occurs because of the children's developing need to identify themselves as basically Anglophone.

To investigate the validity of such a hypothesis, one would need a great deal of information on cultural change -

information which I do not have. From the point of view of language use, though, there are aspects to the language phenomena that we observed which suggest that people in Native speaking communities are attracted to English for local social purposes rather than for any instrumental usefulness. The attractiveness of English medium "pop" culture is evident. Children who would not venture a word in English in school will nonetheless talk to the teacher in the playground about bionic dogs and such. Almost all young people know a number of country and western songs by heart and use phrases from them appropriately in conversation. Adults who would have all their business correspondence, government papers and catalogue orders translated for them (literacy, I realize, is an additional factor here) are still often skilled in joking in English using word play such as puns as well as jokes of content. The draw to English must be strong for people to learn these skills in English when the Native languages in that area are rich in fantastic images and joking styles.

It must also take strong social pressure for a group to develop a language variety which has marked variations from the original model. We received many reports from elderly and parent aged Native speakers who were quick to point out that the Native language gap between generations was very great. Some pointed to vocabulary deficiencies, but others also mentioned major syntactic and phonological changes. This kind of observation always raises several different issues. One is the amount and type of language change that can be considered to be normal language evolution or that must be described as language deterioration. Another issue, linked to the first, is what types of social changes in the community are linked to or might even be the cause of certain language changes.

As far as English is concerned, I would like to underline the need for study of the characteristics and persistence of "Indian English" as a dialect. We could not tell from our observations whether the non-standard forms we heard marked a transitional stage in second language learners' development or whether they were persistent features. Also we do not know how far certain non-standard features extend among English speakers in different Native communities. If it were found that certain features were persistent, it would be tempting to speculate on the role these markers play in setting Native English speakers apart from other speakers of English.

Finally I would like to leave you with one interesting report of code switching we heard of. I talked to a school committee chairman in a community in which I found the school to be almost completely silent during school hours. He told me that the teachers had continually complained that it was almost impossible to get the children to speak any more than the barest minimum of English in class. The parents, on the other hand, had been complaining to him that the children would speak only in English to them at home and often refused to speak Ojibwa. The parents in that community are mainly Ojibwa speakers. The children in this and other communities, it appeared to me, persevered with their

learning of reading and writing because such activities meant that they could avoid oral communication with the teachers. The teachers seemed to accept this at least partly because it was almost impossible to promote any development of oral exchanges. The fact that apparently similar tactics are employed to avoid communication with parents suggests a much more dangerous development. Further study into this sort of situation would be valuable not only for our knowledge about language, but as a point of entry into what may be a critical social problem.

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Linguistic Acculturation in Massachusett: 1663-1771

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Since the first moment of contact between speakers of Massachusett and of English cannot be determined, the earliest linguistic effects of that contact must remain uncertain. Texts written in Massachusett by native speakers in the late 17th and 18th centuries, however, document change in Massachusett at an early date in the form of interference from English. Interference, defined by Haugen as "those instances of deviation from the norms of either language which occur in the speech of bilinguals as a result of their familiarity with more than one language," (1953:1), is most visible in the English loanwords appearing in the Massachusett texts and in the semantic specialization of native terms. While reflecting changes in Massachusett culture as a result of contact, such interference also provides insight into the development and quality of bilingualism in the native communities during the 17th and 18th centuries, as well as the ways in which native practices persisted or were adapted to the new conditions of contact.

Linguistic exchange between speakers of Massachusett and speakers of English began many years before permanent English settlement. Early explorers noted that some natives of southern New England could speak and understand English (e.g. Gosnold in Winship 1968:46). There is also evidence that a pidgin English was spoken in the area during the 17th and early 18th centuries (Goddard 1977:1978).

Intensive contact between the English and the Massachusett speaking peoples began with the establishment of the Separatists at Plymouth, the Puritans at Salem and Boston, and more ephemeral settlements such as those at Wessagusset and Mt. Wollaston. Many early parleys between the English settlers and the Indians were mediated by natives who had learned some English. By 1634, one Massachusett vocabulary had been recorded and at least one Englishman (Roger Williams?) had gained some mastery over the language (Wood 1977:110). Contact between the Massachusett speakers and the English, in spite of some small incidents of violence, was of a non-directed kind (Spicer 1961:520) for the first two decades of English settlement. During the early period of prolonged contact, linguistic communication improved as many natives and Englishmen learned each other's language. The Indians proved particularly skilled in acquiring English, and as William Wood remarked:

> yet are they not a little proud that they can speak the English tongue, using it as much as their own when they meet with such as can understand it (1977:110).

After mid-century those Indians who chose or were forced to join the communities of Christian Indians known as

"Praying Towns" came under increasing English influence, and were encouraged or coerced by missionary and government alike into abandoning many of their aboriginal practices (Salisbury 1974). English control over the natives of southeastern Massachusetts was complete after Indian defeat in King Philip's War (1675-1676), when relations between the English and the Indians assumed the characteristics of directed contact (Spicer 1961:520).

As an outgrowth of the missionary effort, many Indians of the Christian communities learned to read and write in their own language, and some of their writings have survived. The writings include deeds, wills, warrants, depositions, town records, church records, and petitions, and cover such topics as land exchange, disposition of property, inheritance of status and title, and local governmental affairs. It is from these writings, which are presumably closer to the actual speech of the Massachusett in the 17th and early 18th centuries than were the over-literal translations of the missionaries, many words of which the Indians "never understood," (Sewall 1886:400-403), that evidence for this discussion of linguistic acculturation in Massachusett will be drawn.

English interference in Massachusett is most visible in the form of the loanwords which appear in the Massachusett texts. These words are generally restricted to items for which there was no pre-contact correlate, and are listed in Table I. They include terms for units of measurement, words for English currency, for introduced cultivated plants, and for domesticated animals. The Christianized Indians, particularly those of Martha's Vineyard and Nantucket, had adopted livestock along with the more sedentary English-style agricultural way of life imposed on them as the duty of Christians. Josselyn wrote of these Indians:

> they have flocks of corn & cattle about them, which when they are fat they bring to the English markets, the Hogs that they rear are counted the best in New-England (1833:310).

The Gayhead Indians claimed to have a herd of 400 sheep in 1749 (M.A. 31:647), and the Nantucket Indians are said to have prized their horses highly (Little 1980:23).

To a lesser extent, the Christian Indians adopted English domesticated plants, along with their English names. By far the most important of these, at least to the mainland natives, were apples. Daniel Gookin wrote in 1674:

> Of late years some of them planted orchards of apples, and make cider: which some of the worst of them are too prone to abuse unto drunkenness: though others of them that are Christians use it or other strong drink with great sobriety (1806: 151).

Apples and orchards are mentioned frequently in the Natick Town Records, (NTR 1700-1720). Other evidence from Natick

TABLE I

CATEGORY	TERM	GLOSS	REFERENCE*
Domesticated Animals	mare	(mare)	ND 2:39
	sheepsog	(sheep)	MVP 2:64
	cowish	(cow)	MVP 2:64
	oxsonog	(oxen)	MVP 2:64
	cowish wonnechonnoh	(calf, lit. cow, his his young)	MVP 2:64
Cultivated Plants	ahpelesontukqush	(apple trees)	NTR: 21
	wutt:archardumuk	(his orchard, loc.)	NTR: 17
Currency	pound mony	(pounds)	ND 3: 332
	shiling	(shilling)	NTR: 30
	pence	(pence)	NTR: 31
	pany	(penny)	ND 4: 64
	yeaatoooo	(yards)	ND 4: 64
Land, Units of Measurement and Allotment	medowomag	(meadows)	NTR:40
	meddowohkee	(meadow land)	NTR:52
	raddoo, rattoo, rads, radtuoo	(rods)	MVD 1:18, 2:340, 1:31
	arcours, akanoo, akunnue	(acres)	NTR: 38, ND 2:39, ND 1:53
	kommonash	(commons)	MHS 9, ND 4:91
	ukkoman	(his common)	
	share	(share)	MVD 2:340
	bunnuschu	(bounds, loc.)	MVD 6:29
	oobounds	(his bounds)	MVD 6:29

CATEGORY	TERM	GLOSS	REFERENCE*
Dates	apren 29 tays	(April 29)	RI:1
	agus tays 30 1673	(August 30, 1673)	MVD 2:338a
	soptampom, septembr	(September)	RI :2, MVD 2:338:b
	Jannary nekanne	(January 1)	MVD 2:337a
Governmental/Legal	proporitors	(proprietors)	M.A. 31: 645
	selectmens	(selectmen)	NTR: 36
	jureemen	(Jurymen)	NTR: 36
	constableooog	(constables)	NTR: 36, RI:1, 2
	constoppo		
	Servairs	(surveyors)	NTR: 36
	nanauwontamwog-hyghways	(overseers of the highways)	NTR: 36
	town clark	(town clerk)	NTR: 36
	Justice, costos	(justice)	MVP 2:64, RI: 1, 2
	kottuwunneat	(court, loc.)	MHS: 1
	joonesognag	(jury)	MVD 6:373
	widdness	(witness)	MHS: 2
	noomark	(my mark)	MVP 2:64
	nooseal	(my seal)	Cl.:1
	titah, deet	(deed)	MVD 6:372, MVD 6:29
	Quid clame deet	(quit claim deed)	MVD 6:29
	buttission	(petition)	M.A. 31: 645
Material Culture	chember	(chamber, house)	MVP 2:64
	punnueter wunnokash	(pewter dishes)	Cl.1
	punnueter kunnommaog	(pewter spoons)	Cl.1
	punnakit	(blanket)	Cl.1
	patakkoot	(petticoat)	Cl.1
	conneko nuttogkoo	(calico garment)	Cl.1

*Sources include:

Cl. Clements Library, University of Michigan Ms.

M.A. Massachusetts Archives, State House, Boston, Massachusetts. Collections.

MVD Martha's Vineyard (Duke's County) Deeds, Registry of Deeds, Edgartown, Massachusetts.

MVP Martha's Vineyard (Duke's County) Probate Records, Registry of Probate, Edgartown, Massachusetts.

MHS Massachusetts Historical Society Ms. Collections.

ND Nantucket Deeds. Registry of Deeds, Nantucket, Massachusetts.

RI Rhode Island Historical Society Ms.

probate inventories suggests that aside from apples, most crops grown by the Indians were aboriginally derived and presumably referred to by native terms (Bragdon 1979:138). The Indians of Martha's Vineyard and Nantucket may have been growing wheat for sale (Little 1980:15) and perhaps some oats for horsefeed. Terms for these grains are not found in the Massachusett texts, but terms for European grains are loanwords in Eliot's translations, e.g. barleyhash, wheate (Eliot 1685: Ruth 1:22).

By the latter end of the period represented by the Massachusett texts (1663-1771) English currency had almost completely replaced that of the natives. The contrast is reflected in two texts; one written in 1663, in which the phrase maunnum nashshoh tashunumoo translated by a contemporary as "he pays tribute four shillings," contains a native term for currency (ND 2:39). The second is a petition in the Massachusett language from the Mashpee assembly dated 1753 asking relief for a debt of their minister, Solomon Briant, amount to "80 pounds old taner" (M.A. 32:427). The use of English terms for units of measurement such as 'yard' is very likely related to the custom of paying for land with lengths of cloth described in several early deeds. Although English currency terms and presumably English currency were in common use among the Indians by the mid-18th century, there is evidence that native currency was hoarded by some Indian families, and that the English of southeastern New England were still familiar enough with it to name it correctly. A 1742 inventory of the estate of a Natick Indian lists among other items of personal property "wompan and suckonhock," totalling 6 pounds, 10 shillings (MPR 21027). ("Their white they call Wompam (which signifies white): their black Suckáuhock (Sucki signifying blacke.") Williams 1936:155).

Another set of terms borrowed from English which are well represented in the Massachusett texts (a high percentage of which are land records) are those terms designating English units of land measurement. Even the earliest of the Massachusett deeds contain the terms 'acre' and 'rod', often with regular affixes. Dates are also written English-style, although the Massachusett terms for 'month' and 'year' are

frequently adjoined to the English month-name and day numbers. Many special terms related to land ownership and land transferral were borrowed by Massachusett speakers. The use of such words as 'common', or 'share', reflect the adoption of English customs of allotment, and technical terms related to land sale such as 'deed', 'mark', 'seal', and 'witness', were also adopted as loanwords.

Very few descriptive land terms were borrowed from English however. Among these few was 'meadow', a term designating well-watered lowlands usually near rivers. Meadows provided the only suitable fodder for domesticated animals, and the use of the term correlates with the adoption of cattle and sheep by the Indians.

The largest and most varied of the categories of borrowings from English are those terms describing new governmental functions or positions within the native communities. Prior to King Philip's War, those Indians who joined the praying towns were allowed some autonomy in local affairs, and were governed by locally chosen rulers and magistrates according to a system which was evidently a mixture of native practices, English custom, and Judaic formulae introduced by Eliot. This system continued in a curtailed fashion until 1789 when the Indians were placed under the strict control of guardians (Kawashima 1969). The Massachusett texts illustrate the syncretic nature of the native governing systems. Two warrants issued by the Indian ruler of Nukkehkummees (near Dartmough, Massachusetts), Isaac Simmon, name three positions of authority: ruler (negonshaenin), magistrate (nannauwunnuacheg), and constable (constoppo). (Conkey et al. 1978:177, 179). The wording of the warrants suggests that in that area of Massachusetts the ruler acted as a justice, the magistrate heard evidence and made judgements, and the constable apprehended and delivered suspected ciminals (ibid.) The 18th-century Natick, Massachusett town records list other elected positions concerned with the administration of justice, including jurymen, tithingmen, and judges (wassitukeg) (NTR 1713). In Natick, minor cases were heard at town meetings, where decisions were formally handed down by the elected officials. Some of the more remote Indian communities were governed by both hereditary and elected leaders who were responsible for the administration of justice (M. Mayhew 1694:38; Conkey et al. 1978:177).

The adoption of the patrilineal naming system and of English given names was rapid among the Christianized Massachusett speakers. The naming histories of Natick and Martha's Vineyard Indian families took several paths. The most typical of these was the adoption of the single native name as the surname. The Vineyard natives frequently took a shortened version of the native name as a family name (E. Mayhew 1727). No examples were found where a translation of the original name became the surname, but there were several instances where the Indian was labeled by occupation, and that label became the surname, as was true in the case of James the Printer, whose family took the name Printer. Another alternative was the adoption of a newly-minted

English surname as the family name. This name was usually a given name, such as 'Ephraim', or 'Thomas', and may have been the first English name of some unknown forebear, then taken as a surname. Other English surnames adopted by the Indians were taken from English families for whom they had worked as servants, or for whom they felt affection. The Indians conformed to the English practice of bestowing their given names on their children as well.

Many of the natives recorded in even the earliest of the Massachusett and related texts had an English surname or given name, but the native naming system was also in operation until at least the mid-18th century. Experience Mayhew suggests that the English names taken by the Christian Indians of Martha's Vineyard were used mainly by the English to refer to the Indians, and the Indians used more traditional names with one another. Mayhew said of these names:

> (they are) generally very significant, by far more so than those of the English. . . For with them the way was to call every place person and thing by a name taken from something remarkable in it or attending of it (1855:16).

Even Thomas Waban of Natick, son of Eliot's first convert Waban, was known throughout his life by his native name Weegramomenit as well. (Such a name is unexpected for a native of the Natick area, thought to be the locale of speakers of the 'n' dialect of Massachusett.) Frequently both names are mentioned in a text, as the entry for September 12, 1720 of the Natick town records where Susannah "or Mattassonshq" was granted a portion of town lands. The Mashpee petition of 1753 contains several native names (M.A. 32:427). Furthermore, some Indians had more than one English name. Experience Mayhew describes a powwaw, who though "before his conversion was called Cain," afterwards took the appropriate name of Lazarus (1727:129-130). It appears therefore that the English naming system was viewed at least at first as an extension of the native multiple-naming system.

Another possible extension of the native terminological system was the adoption by the Massachusett Indians of English honorifics and titles. The Indians frequently used the honorific 'Mr.,' generally applied by the English to men of considerable wealth or social standing (Dawes 1949: 76), as the equivalent of the native term sontim which, according to Matthew Mayhew, "meant not more than noble or worshipful," (1697:21). Several legitimate sachems of Martha's Vineyard were known as 'Mr.' (W. Gookin 1948:356). Waban, elected ruler of 100 at Natick "a man of gravitie and chiefe prudence and counsell among them, although no sachem," (Eliot 1647:3-4), was also addressed as 'Mr.' The title 'Captain,' often appended to Indian names, and held by only a small percentage of English adult males during the late 17th century (Dawes 1949:79-80), may have been a substitute for 'sachem', or possibly the English version of the title muqwump, 'war chief', a term used to

designate military leaders in aboriginal society. Often English and native titles were intermixed, as when the English overseer of the Gayhead Indians was addressed as "Sonchum Majear," (MHS ms. n.d.). Many Indians also signed Massachusett documents using English occupational labels. Joseph Papener of Mashpee for example, signed a petition with the title "deakon" and the Indian Zachary Hossooit designated himself in a Massachusett will as "Gayhead Justice," (MA 32:427; MVP 2:64). The adoption of English patronyms made distinguishing in writing between father and son difficult, leading many Indians to use the English "Junior" and "Senior." In some cases the Massachusett wuske 'young', was added for good measure.

A common question put to Eliot by his early Indian converts was, "why the English cald them Indians, because before they came they had another name?" (Eliot 1647:17). The Indians, however, soon adopted that English-derived "ethnonym" as a self-designation, and the earliest Massachusett texts contain several variations of the word "Indian." The term 'Indian' was also used as a modifier; the Massachusett texts contain such compound terms as Indian-moewehkomonk 'Indian assembly,' (M.A. 32:427), Enqunohkomuck 'Indian land', (ND 2:39;45), and intiansoq ahtaskauwaoq 'Indian chief-men', (MVD 1:308). The use of the qualifying 'Indian' in native texts is consistent with English practice of the period. All probate inventories taken of Natick Indian estates between 1712 and 1750 for example, label the decedent "Indian" rather than by occupation, as was common in English estates (Bragdon 1979: 140).

The texts, arguably attestations of Massachusett parole, document interference from English in Massachusett speech in a) variations in form of the same loanword and b) competition between the loanwords and partially synonymous native forms (Diebold 1964:502). The English word 'acre' is spelled and affixed variously as akussoo,acersoo, arcours etc. (ND 2:5). Competition between the English loanwords and native forms was also common. One Massachusett text, for example, has numnetassuoq 'tame Beasts' (Williams 1936: 102) for "our creturs (sheep)" (M.A. 31:647). The English form sometimes replaced the native term, as was the case with terms for currency. Native terms frequently underwent semantic specialization as well. The Massachusett verb magoo 'he gives' became the most common term in native deeds for 'convey' or 'sell.'

Although knowledge of Massachusett among the first English settlers and later, among those living in close contact with the natives, was probably more extensive than previously thought, Massachusett did not enjoy the prestige of English, and was characterized by Englishmen such as Cotton Mather (who had trouble learning it!) as "barbarous," "exotick," and "tedious," (1967:II:561-562). English speakers adopted a few Massachusett loanwords, but most interference in English from Massachusett is found in the writings and recorded speech of native speakers of Massachusett who learned English as a second language. Examples of native

writings and speech in English follow:

> and we came to Pannakook a little further there we se some of the Pannakook Indians. (Samuel Numphow to Daniel Gookin. M.A. 31:182)

> you you big constable, quick you catch um Jeremiah Offscow, strong you hold um, safe you bring um, afore me, Waban Justice Peace (Drake 1837:179-182).

Even after one hundred years of contact, and in spite of the fact that the language was virtually extinct by the early 1800's, texts in the Massachusett language show a limited number of English loanwords. The structure of Massachusett may have restricted the variability of interference as well (Diebold 1964:505). Massachusett was a language which "delighted greatly in compounding of words" (E. Mayhew 1885:16).

The limited interference reflected in the text must also have been the result of the conditions under which English was acquired among the natives. Sociological factors such as the age of learning and occupation may have determined the nature of the interference in the language (Diebold 1964:505). English was commonly acquired, if at all, in adolescence or adulthood, and more rarely, in formal schools. Many natives knew no English. In 1674 less than 5 percent of the Indians of Cape Cod were literate in English, although more were probably non-literate bilinguals. Literacy in English always lagged behind its acquisition as a spoken language. In 1698 Thomas Mayhew reported that only three or four Indians on Martha's Vineyard could speak English, "and none to great purpose," (Mayhew to Gookin 1806:205). Samuel Sewall found only two youths at Gayhead who could read English in 1714 (1973:751), and Experience Mayhew bemoaned their lack of progress ten years later (1727:xxiii). The extent and quality of bilingualism among the natives is also unknown. Although Richard Billings of Little Compton claimed that all the adults of his ministry were capable of being preached to in English in 1728 (Kellaway 1961:249), Elisha Tupper when preparing for his missionary work among the Sandwich natives in 1731 still found it necessary to learn Massachusett (ibid.:248). Josiah Cotton was still preaching "Indian" sermons to his native flock in 1748 (Cotton 1733-1748), and in a petition written in the Massachusett language dated 1753, the Mashpee complained, "concerning the English schoolmaster, we are not yet in need of him because we do not understand him, only a few" (M.A. 31:427).

The Massachusett texts seem to reflect the earliest stages of bilingualization (Diebold 1964:505), in which many speakers had only the slightest knowledge of models in the second language, and used them only infrequently in a native context. This is surprising given the fact that the natives of the islands, in particular, were early participants in the fishing economy, or employed as day laborers and servants among the English, and suggests that communication was often

made possible through the ability of certain Englishmen to speak Massachusett. In addition, two of the known writers of Massachusett texts, Thomas Waban of Natick and Japheth Hannit of Martha's Vineyard were bilingual, yet their writings show little interference from English. The absence of English interference in Massachusett may thus also reflect a deliberate separation of the two languages by native speakers, or an increasingly specialized use of Massachusett. Massachusett was clearly the language of the home, and presumably of community interaction in the more remote, well integrated native communities until at least 1750. In spite of widespread changes in political structure, subsistence and in land use patterns, the distinctiveness and cohesion of the native communities must have been reinforced through this use of the native language. The loanwords and other interference from English can therefore best be seen as evidence of those areas in which the Indians experienced the greatest acculturative pressure. While reflecting these pressures, the quality and quantity of interference also reinforces our increasing sensitivity to the persistence of native practices in the face of strong pressures towards acculturation and document some ways in which English forms were adapted to pre-existing native systems.

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The Ottawa Calendar[1]

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One area of Algonquian culture that has remained almost totally untouched by scholarly activity is that of astronomy. For the most part this is due to the fact that much of the knowledge in this area has been lost because of the impact of the more thoroughly worked out system of the dominant culture. However, there are enough interesting pieces of knowledge around to make investigation worthwhile. In this paper we would like to attempt to reconstruct the Ottawa calendar. Our work was inspired, in large measure by Siebert's work in this area for Penobscot presented to this conference three years ago, and unfortunately unpublished; and by recent Native American lunar calendars being published annually by Akwesasne Notes.

Because of the neglected state of the Ottawa calendrical system, this work depends heavily on a number of assumptions, all of which are, we feel, reasonable; but any one of which could ultimately turn out to be flawed in one way or another. Because this paper rests so heavily on these assumptions it is meant to be only a preliminary exploration of the area. We aim at this stage only to chart the ground, and hopefully to stimulate some interest in the area of Algonquian ethnoastronomy in general. All our conculsions must be considered tentative.

To start off, we will lay out our working hypotheses, which are four:

(1) Ottawa (and probably Algonquian in general) time reckoning was based on lunar cycles, and that this worked out in a way typical of lunar calendars, i.e. in any 19 year period there were 12 "normal" years of twelve lunar months and 7 "leap" years of 13 lunar months.

(2) The months change at the new moon.[2]

(3) The month name which shows up in the diminutive is the leap month, and

(4) the determination of the proper month was in part determined by phenomena in the environment which are reflected in the names of the months.

It should be noted that we are not claiming that Ottawa people ever noticed that there was a 19 year cycle. They may or may not have. What we are claiming is that such a cycle is implicit in lunar calendars. But whether the same

sequence of leap years and normal years was kept for every 19 year cycle is unknown.

No speaker that we have contacted so far knows explicitly how the Ottawa caledrical system worked. What is remembered is the order in which the months occur, although there is considerable disagreement as to how the Ottawa months correspond to English months. This is to be expected as a result of the fact that lunar months vary in their dates with respect to solar months. There is also considerable confusion about the leap month, which is compounded by the fact that few speakers know all the month names. However, there is enough consistency in the recollection of the order in which the months occur for us to be quite certain of our proposed order.

Table I gives the list of month names and a comparison of these names with Southwestern Ojibwa (the dialect Baraga recorded, now spoken in Wisconsin and Minnestoa) and with Menominee. This list shows a number of interesting parallels which confirm both the ordering and the naming of the months provided us by our speakers. For example, the third month of the cycle is Sugaring Moon in all three calendars even though the words are not cognate. The same is true of the tenth and eleventh month where the Ojibwa dialects have cognates, but Menominee does not.

Table II gives the dates of the new moon for the three year period 1978-1980 and an association of these new moon dates with the month names. To the best of our knowledge, these dates match the natural events the month names refer to tolerably well. However, there is one further piece of data which is not so well accounted for. One of the few constellations which is remembered is the Daadwahmoog, the Three Men in a Boat, which corresponds to Orion's belt in Western astronomy.[3] We were told that Ziisbaakdoke-giizis "hangs" (goojin) when the Daadwahmoog are "on the horizon". The question is how to interpret the phrase "on the horizon". In particular, the obvious meanings of "on the horizon", i.e. just before dawn and just after dusk give dates around mid-November and mid-May. On November 21 Orion is about 13.5 hours behind the sun, which means that it is rising in the eastern sky around dusk and setting in the western sky around dawn. On May 21 Orion is 1.5 hours behind the sun, which means that it will appear on the horizon at dusk and promptly set. But in order to get a date in the range of Ziisbaakdoke-giizis, viz. late February through mid-March, we will have to reinterpret what "on the horizon" means. At that time of the year Orion is between 7.5 and 5.5 hours behind the sun. In other words, it appears fairly high in the sky at dusk and sets around midnight. At the moment we see two possibilities: 1) "on the horizon" means on the horizon at midnight, and 2) because of the fact that these people were forest dwellers, "on the horizon" does not refer to the literal horizon, but refers to something like 'above the trees', which would be about where Orion would be in late February at dusk.

TABLE I

Month Names

	Ottawa	South Western Ojibwa	Menominee	
1	Nmebin-giizis	Namebini-giizis (Migiziwi-g. (Ba) Cree)	namɛ:pen-ke:soq	Sucker moon
2	Naaban-g.	Onaabani-g./ Bebookwedaagiming-g. (var.) (Niski-g. (Ba) Cree)	wanɛ:w-k.	Crust-on-the-snow
3	Ziisbaakdoke-g.	Iskigamizige-g. (missing from Ba)	su:poma:hkwan-k.	Sugaring
4	Waawaaskone-g.	Waabigoni-g./ Zaagibagaa-g. (N&N only)	pa:hkawan-k. [pa:hkwan-k. in Bl]	Flower Budding Weather clears
5	Gtige-g.	Odehimini-g.	atɛ:hemen-k.	Planting, Strawberry
6	Dehmin-g.	Aabita-niibino-g. (N&N only)/ Baabaashkizige-g., Madwezige-g. Miskwimini-g.	a:pɛhtaw-ne:pen-k.	Strawberry Half-Summer Shooting Raspberry
7	Miin-g.	Miin-g., Miinike-g.	me:n-k.	Blueberry
8	Datgaagmin-g.	Manoomini-g., Manoominike-g.	pawa:ha:n-k.	Blackberry Rice, Ricing
9	Md amin-g.	Waatebagaa-g.	ona:wepimak(at)-k.	Corn Leaves-turn
10	Bnakwii-g.	Binakwii-g., Binakwe-g.	peni:pi:makat-k.	Leaves-fall
11	Gshkadin-g.	Gashkadino-g.	pa:kata:hkamek(at)-k. [pa:hkata:hkamek(at)-k. in Bl]	Freeze-up
12	Gchi-bboon-g.	(Gichi-)manidoo-g.	awe:tok-k.	Big-winter (Big-)spirit
Leap	Shki-bboon-giizsoons	Manidoo-giizis(oons)	awe:tok-ke:soqno:hsɛh	New-winter-little-moon Spirit-little-moon

Aabta-niibin 4th of July
Aabta-bboon New years

TABLE II

	1978	1979	1980
Nmebin-g.	Jan. 8	Dec. 29*	Jan. 17*
Naaban-g.	Feb. 7*	Jan. 28	Feb. 16
Ziisbaakdoke-g.	Mar. 8	Feb. 26*	Mar. 16*
Waawaaskone-g.	Apr. 7*	Mar. 27	Apr. 14
Gtige-g.	May 6	Apr. 26*	May 14*
Dehmin-g.	June 5*	May 25	June 12*
Miin-g.	July 5	June 24*	July 12
Datgaagmin-g.	Aug. 3	July 23	Aug. 10*
Mdaamin-g.	Sept. 2*	Aug. 22*	Sept. 9
Bnakwii-g.	Oct. 2	Sept. 20	Oct. 8
Gshkadin-g.	Oct. 31*	Oct. 20	Nov. 7*
Gchi-bboon-g.	Nov. 30	Nov. 19*	Dec. 7*
Shki-bboon-g'ns.		Dec. 19	

Tentative Calendar - by date of new moon

Dates with * indicate days on which the new moon occurs during daylight hours (approximate).

Our attempts to work out calendars of Ojibwa speaking people, such as those of Cope (1919), Densmore (1929), and Hallowell (1955), have not recognized the leap month at all. Our suspicion is that a thirteen month system was the basic Algonquian system, which was adapted to the natural events of the locale in which a paritcular group found itself.

Finally, we want to make one further observation. From our interviews, we feel that the seasons listed in Table III are climatic terms rather than terms tied to specific groupings of months. (This view differs from that of Cope (1919).)

TABLE III

The Names of Seasons

Mnoogmi	spring
Niibin	summer
Dgwaagi	fall
Bboon	winter

We hope that this brief offering will stimulate some interest in the area of Algonquian ethnoastronomy. An area too long neglected which we hope is not thereby lost.

APPENDIX

Ottawa Terms Relating to Astronomy

Heavenly Bodies (all are animate)	
giizis	sun, moon
dbik-giizis	moon
nang	star
niigaanaasnog	the morning star (Venus)
dbik-nang	the evening star (Venus)
Daadwahmoog	the Three men in a boat (Orion's belt)
Gch-jiig	the Great Fisher (Ursa Major, the Big Dipper)

Actions/States of Heavenly Bodies	
moogsed	(to) rise
bngishmog	(to) set
waawyezid	(to) be full [of the moon]
nangkaag	(to) be start out
giizhgaateg	(to) be the moon out/shining

Day Names	
Nam(h)ewgiizhgad	Sunday
Ntam-giizhgad	Monday
Niizho-giizhgad	Tuesday
Nsho-giizhgad	Wednesday
Aabtweyong/Aabtawgiizhgad	Thursday
Naano-giizhgad	Friday
Ngodwaaso-giizhgad	Saturday
also: Jiibaatgo-giizhgad	Friday
Maanii-giizhgad	Saturday (esp. in Catholic areas)

Some people say Aabtawgiizhgad is Wednesday and Thursday is Niiyo-giizhgad.

NOTES

[1] We would like to thank our Indian sources, espcecially Margaret Waynee, and also John Lawler for his help with the astronomy.

[2] Baraga (1878) lists: "Gisiss ishkwaiassige [giizis ishkwaayaasige]
The moon does not shine anymore,
(the end of a moon or month;)..'
(Part II, pg. 138).

[3] Hallowell (1955) also mentions the use of this constellation to tell the season, but does not give any information which would solve the problem discussed below.

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